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CALIFORNIA STATE JOURNAL OF MEDICINE

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JANUARY · 1922

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Managing Editor - - - - - - - - - - CELESTINE J. SULLIVAN

VOL. XX JANUARY, 1922 NO. 1

EDITORIALS

THE NEW YEAR

Our successes and failures of 1921 as individuals and as organizations, whatever they may be, are history, and we stand upon the threshhold of a New Year. During the coming year, the State Medical Society ought to make a great deal of progress in the advancement of the cause of better medicine. As an organization we will be successful exactly in proportion as we are able to secure the co-operation and support of individual members. We ask and urge that every member of the State Society give something of his time and of his means toward the betterment of his own organization.

Members are asked to bear in mind particularly that continuity of medical and indemnity defense protection and continuity of membership requires that the 1922 dues be paid on or before March 1, 1922.

County secretaries are urged to mail promptly before the 10th of each month their monthly reports to the State Society. The splendid co-operation of many secretaries in this respect is reflected in the county news columns of the JOURNAL. Some secretaries have not yet established the habit of completing and forwarding these reports and in consequence their societies and their members do not receive published credit the JOURNAL is willing and anxious to give them.

County secretaries are also requested and urged to familiarize themselves with the proceedings of the semi-annual conference of state and county officers held in San Francisco September 24, 1921, and published in the November number of the JOURNAL.

County secretaries are also requested, at the earliest possible moment, to furnish names of the officers of their societies for 1922, including the council and including particularly and specifically the names and addresses of delegates and alternates to the State meeting.

Officers in particular and members in general of local societies could render material assistance to their own organizations and the state organization by accepting suggestions contained in the JOURNAL and obviating the necessity of time and expense in more direct and more personal communications. Co-operation in this feature of our work is urgently requested of all and particularly of all secretaries.

The secretary of the State Society wishes every member of the organization a Happy New Year, and asks as one of our New Year resolutions that we all make a special effort to do everything in our power to advance the cause of better medicine during the coming year.

THE PHYSICIAN'S FAMILY

The conscientious physician devotes his time and thought to one thing—his profession. He has little time to study investments and the accumulation of wealth, and too often pays, and pays heavily, for his enforced lack of business training.

But more than that—his family pays. Accustomed to that standard of living demanded by his profession, they are poorly fitted to carry on in the event of his untimely death.

When a merchant, manufacturer, farmer or other person whose life has been devoted to personal interests dies he usually leaves that which has a realizable cash value—either ownership of a business or an interest in it. In either case an income is available for his family.

But when the physician passes away, usually he leaves a few books and instruments, with perhaps some bills receivable and possibly a good-will that has little money value.

Death ends all, so far as the family's income from his profession is concerned; and frequently old age or earlier physical impairment, or mental exhaustion, ends his earning power and puts him and his family into a hard predicament.

There is no class by whom the help of life insurance is more urgently needed than by men of the medical profession. No other thing can take its place—no other investment can be made that will, even in a small measure, operate as a substitute for the earning capacity of the medical man after his passing.

Is your family amply protected? Or have you been lulled to a false sense of security?

Arrange your family's welfare *while you can.* Any substantial life insurance company will advise you wisely.

ORIGINAL ARTICLES

PROLAPSE OF THE UTERUS WITH RECTOCELE AND CYSTOCELE; AND END RESULTS OF VARIOUS OPERATIONS.*

By ALFRED BAKER SPALDING, M. D.,
San Francisco.

From the Women's Clinic of the Stanford University School of Medicine.

Although many of the best operative procedures for uterine prolapse have been devised by American gynecologists, very few satisfactory reports of the late results following these operations can be found in the American literature. Goffe,[1] in 1912, reported the conditions found in twenty-four patients that he examined personally from two to seven years after his operation. Watkins[2] reported the results obtained in sixty-eight cases operated upon by the interposition method since 1905; and recently Clark[3] has summarized a questionnaire sent to eighty-four patients on whom he had operated for prolapse at least one year previously. To me these reports are disappointing, because I believe such reports should include a statement of symptoms and conditions present before operation, the type of operation done for cure of the conditions, and a full report of complications encountered at the time of operation, or during convalescence. Ultimately, these patients should be questioned and examined in the clinic at periods some months or years after operation and a clear statement of symptoms and the condition of rectocele, cystocele, and prolapse noted.

For many years the Women's Clinic at Stanford University School of Medicine has been interested in comparing the curative value of various operations proposed for the relief of marked conditions of prolapse of the uterus associated with cystocele and rectocele. Fairly complete histories have been taken in most cases and very extensive descriptions have been written of the operations performed. The post-operative conditions during the convalescent stay in the hospital have also been noted in the histories.

After leaving the hospital, this group of patients has been followed by the Social Service Department and re-examined by the clinical staff for periods varying from three months to eight and one-half years after operation; and, although from a statistical point of view the number may seem small, the facts obtained by this follow-up method are most instructive. It is by studying critically such a series as this that better technic has been developed in the clinic, and it is hoped that a full presentation of the difficulties encountered in this special branch of pelvic plastic surgery will be of interest to others treating women suffering from this most distressing obstetrical ailment.

From July 1, 1912, to January 14, 1921, seventy-six patients with uterine prolapse have been operated upon in the Women's Clinic of the Stanford University School of Medicine. Seventeen patients were treated by interposing the uterus under the bladder according to the technic described by Watkins[2] and others[4]; seventeen by transplantation of the sacro uterine ligaments from the posterior to the anterior surface of the cervix, as described by Jellett[5]; twenty-four by vaginal panhysterectomy, with fixation of the bladder to the broad and round ligaments, as described by Goffe[6]; twelve by vaginal supravaginal hysterectomy, as described by Spalding[7]; one by vaginal supravaginal hysterectomy, as described by Vineberg[8], and five by various methods of anterior colporrhaphy.

All the patients in this series had cystocele and sixty-eight had rectocele. The cervix was lacerated in fifty-two of the patients, was eroded in thirty-eight, and hypertrophied in fifty-one. The uterus was retroverted in fifty-one patients, was prolapsed to the vulva in twenty-six, through the vulva in sixteen, and presented outside the vulva with cystocele and rectocele in thirty-four patients.

The average age of the patients was forty-three years, the youngest being twenty-five and the oldest sixty-nine. There was an average of slightly over five pregnancies to each patient, with an average of four para. Prolapse followed with some patients after a single confinement, the largest number of children being twelve. Of the seventy-six patients, sixty-four had had spontaneous confinements and thirty-eight had had spontaneous abortions. Only twelve gave a history of operative deliveries and ten of induced abortions.

The chief complaint with fifty-nine patients was "falling of the womb," although thirty-two mentioned backache; twenty-eight, constipation; twenty, headache; fifteen, menstrual disturbances; fourteen, cystitis; thirteen, incontinence of urine, and ten, pain in the lower abdomen, as associated disturbances.

In all but one case, some type of perineorrhaphy was done, and in six of the more recent cases the rectum was supported by a more extensive proctopexy. In somewhat less than half the cervix was repaired either by amputation or trachelorraphy. With a few patients also such operations as hemorrhoidectomy, herniotomy, tightening the bladder sphincter, salpingectomy, oophorectomy, appendectomy, myomectomy and abdominal uterine suspension were done.

Pathological examinations were made in each case, with the result that thirty-two showed chronic cervicitis; twenty-one, endometritis; fourteen, myoma or adenomyoma of the uterus; twelve, metritis; six, salpingitis; three, cyst of the ovary; two, oophoritis, and one, a pre-cancerous condition of the cervix. This last patient showed very marked epithelial proliferation in an ulcerated cervix, but no actual invasion of the tissues could be demonstrated.

Forty-five patients developed a fever of 101° at some time during their convalescence and forty-two had a rise in pulse rate of over 100 during

*Read before the Fiftieth Annual Meeting of the Medical Society of the State of California, Coronado, May, 1921.

the first twenty-four hours following operation. Of the post-operative complications met with, one of the early vaginal hysterectomies had a severe post-operative hemorrhage; two developed a pelvic hematoma; one, pneumonia; two, vesico-vaginal fistulae; one, pelvic abscess, and six, local perineal infections. The two patients with fistula were apparently cured by a second operation, although one of the patients returned a year later with stone in the bladder. One patient died of peritonitis after a vaginal hysterectomy, due to an overlooked streptococcus cystitis which had followed an attack of acute streptococcus angina shortly before coming to the clinic for operation, and one patient died of shock following an apparently simple vaginal supravaginal hysterectomy. The remaining seventy-four patients left the hospital after an average convalescence of twenty days.

Thirteen, discharged in good condition, failed to return later to the clinic, and because of false addresses and often false names, it has been impossible for the Social Service Department to locate them. Thirty-one of the remaining sixty-one have been followed for periods varying from one to eight and a half years. Of the sixty-one patients in this group, all but eight, or 87 per cent, were entirely cured of their original complaints. One patient, whose chief complaint was backache, died some four years later of tabes dorsalis, and a second patient, with backache, was later demonstrated by the X-ray to be suffering with a chronic arthritis of the dorso-lumbar spine. A third patient, with perfect pelvic restoration, but unrelieved of her chief complaint of bladder frequency, proved later to be suffering with renal tuberculosis.

These experiences illustrate the fact that patients with pelvic prolapse need particular study, for the reason that the very evident mechanical displacement may distract attention from other serious disturbances. On nineteen patients, at some subsequent examination, it was possible to demonstrate some degree of recurrence, although many of these patients were relieved of their original complaints. Three patients had decided prolapse of the uterus. The operation for these patients had not been well planned, inasmuch as the uterus, which reprolapsed after an interposition operation, was pathological and should have been removed. The patient was cured by a subsequent vaginal hysterectomy. The interposing of the cervix under the bladder, following subtotal vaginal hysterectomy, was not successful in a second case, and this technic has been given up in the clinic. This patient was cured by suspending the prolapsed cervix by laparotomy.

The third patient was complicated with salpingitis and cystic ovary. An attempt was made to cure her by anterior colporrhaphy and proctopexy with a Gilliam suspension and removal of one ovary and tube. A better plan would have been to have done a panhysterectomy with suspension of the vagina on the round ligaments, together with an overlapping of the fascia under the bladder and proctopexy.

Cystocele recurred with nine patients. This is an entirely preventable occurrence if the pelvic fascia is overlapped under the bladder. We have had no cystocele recurrences since doing this operation the past four years, although in the interposition operation this technic has not been considered necessary.

Rectocele gives the greatest amount of concern in all types of operations for prolapse and is the most frequent type of recurrence. In our series, seventeen, or over 22 per cent, had return of rectocele. The rectoceles recurred following the usual procedure of perineorrhaphy, no matter what particular type of operation was done, but no rectocele has recurred following the more extensive proctopexies. The usual experience is that so much time is consumed in operating on the bladder and uterus that time is not given for a proper and complete operation on the rectum.

CONCLUSIONS.

Prolapse of the uterus can be cured with a very small degree of operative risk if the patients are carefully observed before operation to exclude other causes for cystitis and backache. Prolapse should recur only rarely after operation and cystocele never, provided infection can be avoided. Rectocele is more difficult to cure unless a high dissection of the posterior plane of the pelvic fascia is made and the rectum fixed to a point behind the cervix.

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THE 1922 MEETING

All members and guests, who are planning to attend the State meeting in Yosemite, Monday to Thursday, May 15 to 18, 1922, are urged to promptly communicate with Mr. H. H. Hunkins, 637 Pacific Building, San Francisco, regarding transportation and hotel reservations. Mr. Hunkins is chairman of the committee who has this matter in charge, and will give prompt attention and courteous reply to any communications.

Members interested in the program should communicate promptly with the chairman or secretary of the section they are interested in, because the program will be closed during this month. A list of the officers of sections is to be found on page 31 of this number of the JOURNAL.

EXTRAPLEURAL THORACOPLASTY*

By HERBERT A. JOHNSTON, M. D., Anaheim, Cal.
(Johnston-Wickett Clinic, Anaheim, California.)

While the treatment of tuberculosis of the lung will always be the work of the internist, there are certain cases where surgery should be the treatment of choice and from recent developments it appears that this number will be greatly increased in the near future.

Artificial pneumothorax (Forlanini-Murphy) is of great assistance in the treatment of selected types of pulmonary tuberculosis, particularly when the pulmonary and costal pleurae have not become too adherent. Where the adhesions are dense, the pleuræ thickened, attempts at inflation usually fail. In a certain number of such cases surgery of the bony framework of the chest offers definite collapse and immobilization, with a chance of relief or even a cure.

It is well known that absolute rest of a tuberculous focus tends towards its resolution. To prevent mobilization of the diseased lung whose adherent pleurae preclude successful pneumothorax, different methods have been tried. As early as 1908 Friedrich of Munich devised a modification of the Schede operation which he termed "Extrapleural Thoracoplasty." This was done by means of the Schede incision and while successful as to detail, produced considerable shock and was none too well suited to the weakened individuals upon whom it was usually necessary to operate. Sauerbruck, Friedrick's assistant, modified the operation by doing it in two or more stages and under local anaesthesia. The results were better. Wilms of Heidelberg modified the operation still more by using his "columnar resection" anterior and posterior, leaving a central section of each rib to act as more effective compression and better protection to the thoracic viscera. The operation is comparatively simple and in the hands of experienced surgeons consumes but little time and is seldom followed by shock. The immediate risk to the patient is small. The fact that the attachment of the ribs and sternum is cartilagenous provides at once a readily movable and flexible articulation, so that by confining the surgery to the vertebral ends of the ribs, removing large sections which include the angle of each rib, a satisfactory collapse and immobilization of the lung may be procured. It was A. Boiffin, who first clearly demonstrated through J. Gourdet, a pupil, precisely why it is the posterior portion of the rib that must be removed. Gourdet's argument, quoted by Bull, is as follow:

"On account of the yielding rib cartilage the anterior part of a rib can be pressed inwards, while the posterior portion is stiff and, practically speaking, immovably connected with the vertebral column, and in any case can only be moved up and down a little. Further, the posterior part of a rib exhibits a marked concavity forwards, or, in other words, forms an arc the radius of which is much less than that of the arc of the rib otherwise; the angle of the rib forms the most prominent point in this arc behind. Any resection of the ribs which is situated in front of the angle of the scapula leaves behind a stiff unyielding piece of rib, which in accordance with its length will prevent the soft parts from falling in and diminish the costo-vertebral angle. If, on the other hand, we remove the posterior stiff part of the ribs, the anterior part can very easily be turned about the costal cartilage and pressed in towards the thoracic cavity and backwards towards the posterior fragment of rib, so that the entire arc of the rib decreases considerably in its curve and thereby also decreases the volume of the thorax. By this method the anterior part of the ribs is not hindered in its movements by the soft parts, which in other methods stretch over the projecting posterior end of the rib. This principle, as set forth by Boiffin-Gourdet, runs through both Sauerbruck's and Wilms' 'Columnar Resection.'"

The selection of patients upon whom it is best to perform collapse by means of extrapleural thoracoplasty requires particular skill. While in the main one might say that any patient requiring collapse therapy, upon whom the attempt to produce pneumothorax was unsuccessful, would be eligible to chest wall surgery, there are certain limitations. A great deal depends upon the condition of the opposite lung. While it would seem that a slight infection would not materially interfere with the outcome of the operation, the writer is of the opinion that the surgeon should be very cautious in attacking any thorax where the "better" lung shows very evident infection. Roentgenographic studies of all cases should be made. These will reveal the presence of cavitation and give a better idea of the condition of the pleurae, especially its thickness and adhesions.

Case Report

Case No. 7907, referred by Drs. Kalb and Kirschner, Monrovia. Miss A. K., age 31, teacher and native of Nebraska, came to California eight years ago. One sister died at 24 years, of phthisis, otherwise family history is negative. Had usual childhood exanthemata, whooping cough at 15, and bronchitis at 29 with recovery.

Has always enjoyed good health except as above. Very fond of outdoor life and indulged in athletics. Began coughing in February, 1918. Temperature range from 99° to 103°. Became suddenly worse in January, 1919. Change in posture was followed by profuse expectoration and rapid rise in temperature to 105°, with chills. Incomplete pneumothorax by Dr. Kalb repeatedly until December, 1919, resulted in general improvement and reduction of highest temperature from 104° to 102°. Patient kept continuously in bed in a sunny, well ventilated room, near the foothills.

Physical examination revealed a very thin, poorly nourished patient weighing about ninety pounds, having lost twenty-seven pounds in one and one-half years. The heart was regular, rapid (104), no murmurs. The arterial blood pressure was 110/75. The respiratory movements were decreased on right side with increased dullness, harsh bronchial breathing and evident cavitation. The blood contained Hemoglobin 60 per cent, Erythrocytes 3,160,000 and Leucocytes 17,350. Clotting time, 5 minutes. Urine contained a doubtful trace of albumen, occasional pus cells, many crystals calcium oxalate, some epithelial casts, otherwise negative. Roentgenogram of chest showed right lung cloudy

* Read before the Fiftieth Annual Meeting of the Medical Society of the State of California, San Diego, May, 1921.

throughout with cavities and many pleural adhesions. Left lung clear except for a few calcified glands at hilus.

On June 8, 1920, operation under local anaesthesia, a parasternal incision was made on right side. Extrapleural resection of parts of first to fifth ribs inclusive, closure of muscles and skin. No drainage. Patient made an uneventful recovery, leaving hospital in two weeks. Her general health gradually improved. Sputum decreased and temperature curve improved. Pressure bandage applied.

On September 2, 1920, she was referred back again by Dr. Kalb for the second stage of operation. The roentgenogram showed considerable collapse of the lung but not sufficient to obliterate the cavities. She was not coughing as much and the temperature had been considerably lower since the first stage of the operation. There was practically no respiratory movement of the right chest and no bony union at points of resection. Being quite apprehensive about the operation, a combination of morphine, procain and gas oxygen anaesthesia was used. A paravertebral incision exposing angles of fifth to eleventh ribs being made, sections varying from two to four inches were removed in each instance, always including the angle, without opening the pleural cavity.

She left the hospital in a week and made a good recovery and, excepting a slight infection of lower end of incision and some neuralgia in shoulder, had no post-operative complications.

In a letter dated November 24, 1920, she says: "My temperature is seldom above 99° these days, sometimes normal all day."

Her recovery has progressed satisfactorily up to the present time and the outlook is good.

Summary

1. The extrapleural rig resection under local anaesthesia is a comparatively safe operation.
2. The patient with large cavities and toxic conditions from pus absorption, still has a chance even if artificial pneumothorax has failed.
3. The proper selection of cases for operation is of more importance than anything else and requires careful study.
4. In some instances it is better to divide the operation into more than one stage.
5. Extrapleural resection of the angles of the ribs offers the best means of collapsing the lung.

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URINARY PUS CELL COUNT*

By LEON J. ROTH, M. D., F. A. C. S., Los Angeles

Routine laboratory reports concerning pyuria are often fallacious and the interpretations of them frequently lead to wrong opinions, not only from a viewpoint of diagnosis or prognosis, but in segregating cases that either are or are not worthy of serious study.

In the urine the importance of a small amount of pus originating from the glands or mucus membranes of the lower urinary segment or from the genitalia may be nil, yet upon centrifuging such a specimen many corpuscles will be demonstrated that may wrongly stimulate the notion of severe infection. Such interpretations are further induced because the urine submitted for examination has not been properly collected and inspected.

Gross infections are quite apparent and usually the microscopic search for pus cells is negligible, but the finer infections, such as pyelitis, pyelonephritis, obscure prostatitis and vesiculitis, and the remote urinary infections of children and young adults, are problems the course of which becomes more complicated and result of treatment more uncertain without absolute microscopical control of the actual number of white corpuscles.

A characteristic of renal pyuria is that the exhibition of cells is consistent and constant. Urinary pus may be decreased somewhat by rest, and increased by exercise, cold, and alcohol, but with unusual exception, infection once chronically established is continuous and the variation in intensity of this is slight.

A drop of pus in a centrifuged specimen of 100 mils or ten drops in a like volume will, in a pipetted deposit on a slide, show the same number of cells. The microscopic examination of 1 mil or 10 mils of pus in concentration will furnish such crowded fields that they cannot be told apart. The amount of pus produced by a urethral shred collected by pipette from the bottom of a centrifuge tube will, by comparison, show as many cells under a cover glass as a like quantity of pure pus similarly obtained.

Because of the consistent quality of a given specimen of urine 1 c.mm. taken from 10 mils or 100 mils will give the same number of cells.

Until recently we have been counting a definite number of fields and making our estimate on the average number of cells per field in uncentrifuged specimen. This is not a precise method, as cover glass pressure and fluid dispersion cannot be controlled.

Therefore, as a means of more or less accurate diagnostic and prognostic aid, the following method has been adopted. The technique is both rapid and simple, and the count is made without centrifuging.

The fresh specimen of urine is thoroughly shaken and a portion drawn into a red blood cell pipette. This pipette is chosen because it facilitates a final agitation of the fluid. A Thoma Zeiss counting chamber is then filled with the fluid in the method used for counting blood cells. The eyepiece of

* Read before the Fiftieth Annual Meeting of the Medical Society of the State of California, Coronado, May, 1921.

the microscope is adjusted so that the diameter of the field is eight small squares. One hundred fields are then counted, disregarding the ruling of the counting chamber. The resulting number multiplied by .7957728 will give the number of pus cells in 1 c.mm.

The factor .7957728 is found by the following means:

The field is eight squares in diameter. The radius expressed in mm. is .2 mm. The area of one field is Pi r^2 or 3.1416 x .04 equals .125664. The depth of the chamber is .1 mm.; therefore, the volume of one field counted is .125664 x .1 equals .0125664. If .0125664 equals the volume of 1 field, 100 fields equal 100 x .0125664 or 1.25664. 1.25664 is greater than 1 c.mm., 1 c.mm. divided by 1.25664 equals .7957728 or the factor with which to multiply to obtain the number of cells in 1 c.mm.

The following figures have been chosen, arbitrarily, to designate the degree of pyuria:

0	per c.mm.	No pus cells. 0	Per field 0.
0-100	"	Very few. . . . . 1 plus	" 1.
100-300	"	Few 2	" 2 to 3.
300-500	"	Moderate amount. .3	" 4 to 6.
500-700	"	Many 4	" 6 to 8.
700 plus	"	Loaded 5	" 9 or more.

The variation of specific gravity has no great influence upon computations, but we have adopted 1000 as a standard and the formula expressed as follows:

The known specific gravity is to 1000 as the number of pus cells in 1 c.mm. is to x.

e. g., 1020 : 1000 :: 102 : x.

As a control in the count following prostatic massage the bladder is thoroughly irrigated and finally filled with 100 cc. of mild antiseptic solution. This is voided after massage and the count made using this 100 cc. as a standard quantity. The estimate here, as elsewhere, is relative.

It is desired to convey the suggestion that in making plural counts the physical character and quantity of the urines should be closely similar.

(927 Pacific Mutual Building, Los Angeles)

TREATMENT OF GOITRE

By C. L. HOAG, M. D., San Francisco.

When we review the history of goitre, we find that for many years it was regarded as a disease to be treated by medicine alone. It was largely the work of Kocher that made the surgical treatment so successful. Year by year, with increasing experience, and technical skill, surgeons have lowered the mortality rate and have taught the profession, as well as the laity, the need for early operation if irreparable damage is to be avoided. The development of X-ray and Radium therapy has opened up new fields in the treatment of many diseases, and it is not surprising that the goitre problem has received its share of attention. The pendulum has swung from medicine to surgery and now seems to be swinging towards radio-therapy. Much of the treatment is done, unfortunately, in a perfunctory manner, without sufficient thought and care, without proper choice of cases, and without a knowledge of those general principles which are so essential to the intelligent choice of therapeutic methods.

It would seem that a word of warning is particularly needed at this time when this form of treatment is so often carried on by physicians, or even technicians, who have had little or no experience in the treatment of goitre, or even with general radiotherapy.

Our whole system of modern medicine is based upon correct diagnosis. When a diagnosis of thyroid disease has been made only the first step has been taken towards establishing a rational basis for treatment. It is just as necessary to recognize clearly the various forms of thyroid enlargement as it is to distinguish one type of intestinal parasite from another, or to differentiate empyema from pneumonia.

The clinician and the pathologist do not entirely agree upon the classification of goitre, as the pathological picture is not always in accord with the clinical findings. However for practical purposes the following classification meets all requirements.

GOITRE

Atoxic	(1)	Simple hypertrophy, adolescent goitre
	(2)	Colloid, calcified or cystic
	(3)	Simple adenoma
Toxic	(1)	Toxic adenoma
	(2)	Hyperplastic (exophthalmic)
Malignant	(1)	Carcinoma.
	(2)	Sarcoma, etc.

In well developed cases it is usually easy to classify goitre into these groups, but there are many border-line cases giving rise to mild signs and symptoms in which an accurate estimate of the glandular function is essential. It is not only necessary to know that an increased or decreased function exists but also the degree of that changed function. This is often impossible clinically, for a large goitre may actually be deficient in thyroid secretion, while a barely noticeable gland will produce an extreme degree of hyperthyroidism. The thyroid secretion now appears to be the principal regulator governing metabolic processes in the body. By determining

the basal metabolism in goitre patients, an accurate estimate of thyroid activity is secured.

As far back as 1883, Lavoisier made studies in basal metabolism. Many other investigators have contributed to this subject since his time. Briefly, the output of CO_2 bears a direct ratio to the rate of tissue destruction. By measuring the O intake, or the CO_2 output from the lungs over a given time, the rate of tissue destruction is determined. This rate is a constant in all healthy individuals, when taken under standard conditions of food and rest, and corrected for the body weight. It is, therefore, the normal or basal metabolic rate of chemical change within the body cells. While this rate varies very little in health it may be either increased or decreased by disease. With the simplified apparatus now obtainable for this estimation, it is rapidly becoming a valuable adjunct to diagnosis.

A number of diseases influence the metabolic rate, but the changes found in goitre are the most striking of any. In exophthalmic goitre, the rate may actually be doubled—cases of +115 per cent increase having been reported—while in myxedema it may fall to 25-40 per cent below normal. Even allowing for a certain error in the determination, it is more accurate than any clinical estimate and gives a measure of the degree of changed function. It should be used to corroborate clinical findings, not only in toxic conditions but also in large non-toxic goitres where hypothyroidism may be an unlooked for and unrecognized condition. It is invaluable in determining the dose of thyroid extract or thyroxin to be given in myxedema, also in checking up toxic goitres relapsing after operation.

Again, it is valuable in determining the opportune time for operation, or that stage in which the experienced clinician has what Plummer calls a "hunch," that operation will be well borne. At the Crile and Mayo Clinics radical operation is not done in those toxic cases showing a basal metabolism over +50 per cent. Medical treatment, ligation of the superior thyroid arteries and X-ray are used until this point is reached, before removal of the gland is done. However, the time for operation must not be selected upon the basal metabolism alone, as the phase of the disease, from a clinical standpoint, is even more important. All toxic-goitre patients have alternating periods of exacerbation and recession. They do not stand operation well during those periods when the disease is on the increase, even though the metabolic rate is well below +50 per cent.

Simple and adolescent goitre: This form usually comes on in early life, during the period of adolescence. The thyroid is uniformly and moderately enlarged and there is a corresponding increase in all its histological parts. As a rule, it presents few or no symptoms and the metabolic rate is not increased. It is believed by Marine to be an expression of an effort on the part of the thyroid to compensate for a deficient iodin supply in food and water. This form of goitre usually responds to medical treatment with small doses of iodin. Various forms of iodin may be used. One of the simplest and most pleasant is the Syrup of the Iodid of Iron in twenty-minim doses daily, every alternate month. If medical treatment is not successful, X-ray therapy may be tried in addition to the use of iodin, the lack of which is believed to be the cause of the hypertrophy.

Colloid, calcified and cystic goitre: This type of non-toxic goitre may appear at any age. It comes usually late in life, it grows slowly and is often confined to one lobe. When both lobes are involved they are usually unequal in size. Symptoms are from pressure only. The metabolic rate is usually not affected but may be below normal if the normal thyroid tissue is sufficiently destroyed or compressed. The treatment is purely surgical and is called for to relieve pressure and to improve the appearance of the patient. I can not too strongly emphasize that in these cases the X-ray is definitely contra-indicated and if used may destroy the remaining thyroid tissue and bring on hypothyroidism.

Simple and fetal adenomata: These forms are believed to arise from embryonic cell rests. They are usually bilateral, discrete, freely movable masses, multiple in number, varying from the size of a shot to that of a baby's head. They appear at any time in life and grow slowly. Many, later, show toxic signs, others either calcify or degenerate, and become cystic. All tend to compress and replace normal thyroid tissue. Many grow to such size that they produce pressure symptoms upon nerve trunks, the trachea or the oesophagus. The basal metabolism is not changed. The principles of treatment are the same as those for colloid goitre and X-ray is again strongly contra-indicated.

Toxic adenoma: A certain percentage of the simple adenomata become active and produce all the toxic signs and symptoms found in exophthalmic goitre *except the exophthalmos.* These adenomatous masses are usually multiple, circumscribed, vary in size and may affect both lobes. While heart changes, rapid pulse, loss of weight, weakness, diarrhoea and an increased basal metabolism are present, these signs are usually less marked than in hyperplastic goitre. The patient generally states that she has had a goitre for many years, but it occasioned her little trouble until she was about 35. *In contra-distinction to this type, a true hyperplastic goitre, as a rule, gives marked symptoms within one or two years after its appearance.* Any toxic adenoma with a basal metabolism above +10 per cent is producing heart changes and should be treated. Some exhibiting mild toxic symptoms may show an increased basal metabolism only during periods of exacerbation.

X-ray does not affect this type of goitre and is definitely contra-indicated as in simple adenomas. It not only does not alter the adenomas but it damages the remaining norml thyroid tissue which may be barely sufficient in amount to maintain health. It is this change in normal thyroid tissue which is responsible for the apparent though temporary benefit frequently seen after radiation. These masses should be removed surgically, while

taking great care to preserve the normal thyroid tissue surrounding them.

Hyperplastic or exophthalmic goitre: This is the type with which we are all reasonably familiar and more seriously concerned. Exophthalmos, either unilateral or bilateral, with positive von Graefe and Stellwag sign; pulsating goitre mass, either large or small; rapid, irregular heart, often showing signs of hypertrophy and myocarditis; tremor of the hands and tongue; diarrhoea; rapid loss of weight; marked nervousness and change in disposition and a greatly increased basal metabolism are all signs which make diagnosis easy. *In contra-indication to the toxic adenoma these goitres develop within one to two years and the signs and symptoms are often recognized before the thyroid enlargement is noticeable.*

Even when these classical signs are not sufficiently well developed to warrant a diagnosis of hyperthyroidism, the basal metabolism is already well above normal and furnishes the first reliable proof that the disease is present.

The pathological picture shows the acini, normally tubules, lined with a single layer of cells, now packed with newly formed epithelial elements, all active in secretion.

Fortunately, it is upon this type of growth that X-ray and Radium has its most effective action. As in Cancer, these newly formed cells, resembling the embryonic types, are most affected by radiation. Here, Roentgenotherapy may be of the greatest value, and if not curative, very helpful in decreasing the amount of thyroid secretions and the signs and symptoms of toxicity. In some cases, radiation is apparently curative, in others the effect is temporary and this treatment must be followed by a bilateral resection of the gland, with or without previous ligation of the superior thyroid arteries.

The milder forms of treatment are especially useful in preparing the patient for operation when the metabolic rate is above +50 per cent.

Hyperthyroidism is a rapidly progressive disease. Permanent heart damage keeps pace with its advance. While conservative treatment should be given a fair trial, the tendency to procrastinate and dilly-dally along with these toxic goitres can not be condemned too strongly. Treatment must not only be beneficial but positively curative, reducing and keeping the metabolic rate well below +20 per cent. Above this point, heart damage is still going on, even though the patient is much improved.

The use of Roentgenotherapy should be controlled by frequent determinations of the metabolic rate and quickly followed by resection if continued and rapid improvement does not occur.

Malignant growth—Carcinoma, sarcoma, etc.: These conditions are relatively rare but are not infrequently seen. The diagnosis is based upon the same principles here as it is elsewhere in the body, namely, steady growth with fixation to the surrounding tissues. Naturally these tumors must be removed carefully and after that the area should be well treated with X-ray or radium.

SUMMARY

(1) It is necessary to determine accurately the type of goitre before rational treatment can be given. The basal metabolic rate is an important aid in corroborating the clinical findings.

(2) X-ray or Radium therapy is indicated in simple hyperplasia and hyperplastic goitres only. It is contra-indicated in colloid, cystic, nodular and adenomatous types.

(3) While the treatment of goitre is essentially surgical, medical treatment, Roentgenotherapy and radiotherapy are sometimes curative and are often helpful in decreasing thyroid activity and in preparing the patient for operation.

177 Post Street.

A LABORATORY AND CLINICAL STUDY OF THE BACTERICIDAL ACTION OF SOLUTIONS OF RADIUM EMANATION

By JOHN ALBERT MARSHALL, D. D. S., Ph. D.,
San Francisco.

From the Radium Laboratories of the University of California Hospital; the Research Laboratories of the George Williams Hooper Foundation for Medical Research and of the College of Dentistry, University of California, San Francisco.

Recent observations upon the use of radium emanation indicate that there is a possibility of employing this substance in the treatment of chronic dental abscesses. Until further laboratory data can be obtained, it appears advisable to mention briefly the results thus far recorded, with the hope that other workers in this field may be sufficiently interested to verify some of the conclusions.

The bactericidal action of radium has been studied particularly by Lequeux and Chrome,[1] and Iridell and Minett.[2] In their experiments they exposed different organisms to radium emanation for varying periods of time with a noticeable inhibitory effect upon the growth of cultures of streptococcus. Although the author has not repeated the experiments referred to above, his clinical findings are in apparent accord with the deductions offered. Bacteriological examinations of the treated canals indicated sterility in 85 per cent of the cases. In fact, the summary presented points to the possibility of a new application of radium in the treatment of certain diseased conditions.

The apparent success which has attended the radium therapy of skin lesions suggested the advisability of developing a modification of the present method of application which would make possible the study of the effects produced by this agent on chronic dental apical abscesses. A summary of nearly a year's observation of clinical cases shows that lesions of this type yield readily to the new therapy, and that up to the present time no untoward effects of the radium treatment have been observed.

Through the courtesy of Dr. Howard Morrow, Dr. Laurence Taussig, and Mr. L. B. Clark, it has been possible for the author to secure capillary tubes containing radium emanation. These tubes had been used in the skin clinic and eye clinic for various purposes until the "de-emanation" had

proceeded to such an extent that further application for this work was purposeless. Although the degree of radiation is recorded in the tables in terms of millicuries, the measurement of the Beta radiation from radium *D* and *E* has not been made.

Radium emanation or Niton is a gas, the disintegration products of which are solids. It is a solution of the solids which is being employed. That this solution contains alpha, beta and gamma rays is known, but the effect upon diseased tissue is perhaps due to the predominance of the beta radiation coming from radium *D* and *E*. It may be recalled that Tarnowsky[3] quotes Hektoen to the effect that radium "emanation" inhibits phagocytosis and, hence, lowers the natural resistance of the affected part; but in these experiments I have employed, as already stated, a preponderance of the soft beta rays.

METHOD OF PROCEDURE

A small amount of Ringer's solution may be rendered radio-active by crushing in it a capillary tube containing a known quantity of radium emanation. This operation is conveniently accomplished by placing the tubes in a sterilized mortar of about 20 cc capacity, covering the tubes with Ringer's solution and then crushing them. The preparation is transferred to a suitable container and carried to the operating-room. On account of the rapidity with which the radio-activity of this solution diminishes, it was found advisable in this research to crush the tubes at the exact time at which the experiment was performed, but no more than an hour was permitted to elapse between the preparation of the solution and its application in the clinic or laboratory.

The radio-active liquid was carried to the root canals of the tooth by means of J. & J. sterilized cotton points. These were sealed in the canals for a period of from one to four days. Subsequently the treatment was removed, the pulp canals tested for sterility, and finally filled. With one possible exception, there has been no evidence of succeeding soreness or pain. The exception referred to is one in which the pericementitis resulted more probably from mechanical trauma incident to the previous curetting of the canal than to the action of the radium itself. The amount of solution carried to the tooth averaged 0.05 cc.; in this there was approximately 0.0630 millicuries of radium emanation. The variation in the dosage is noted in the appended table.

Table I

Millicuries of tubes *	Millicuries per cc. of solution	Amount placed in tooth
6.0	1.20 per cc.	.060 millicuries
7.9	1.58 " "	.079 "
5.5	1.10 " "	.055 "
4.6	0.92 " "	.046 "
9.1	1.82 " "	.091 "
7.5	1.50 " "	.075 "
6.3	1.26 " "	.063 "
5.3	1.06 " "	.053 "
13.8	2.76 " "	.138 "

* Not freshly prepared. These values were computed from tubes which originally contained a radio-activity varying from 50 to 100 millicuries.

Table II

Summary of Twenty-seven Cases

Clinical condition	Treatment	Results
Chronic apical abscess.	Radium applied four days.	Canals filled. No unfavorable symptoms after ten months.
Infected pulp with acute pericementitis.	Radium applied seven days.	Pericementitis very severe. Tooth extracted.
Chronic apical abscess of long standing.	Radium applied seven days, removed. Second treatment given.	Canals filled and no unfavorable symptoms after ten months.
Acute abscess.	Two treatments of radium of three days each.	Canals filled. No unfavorable symptoms after six months.
Chronic apical abscess.	Two treatments of radium of three days each.	Canals filled. No unfavorable symptoms after six months.

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THE MISSING LINK IN OUR OPERATIVE TECHNIQUE

By P. CAMPICHE, M. D., San Francisco

For several years I have intended to call the attention of the surgeons of the West to a weak point in the work of our operating-rooms, namely: the lack of nurses properly trained to assist at major operations.

The prevailing system consists in having the pupil nurses spend, in the operating-rooms, three or four months of their training, during which time they assist as best they can at all major and minor operations. The whole thing has been arranged with the sole idea of suiting the nurses three years' course, and while the system is eminently advantageous to the pupil nurse, I claim that it is unfair to the patient and has no regard for the convenience of the surgeon.

I recognize that most pupil nurses do their best, are willing workers, eager to learn, and are quite in earnest about their duties; but alas, they are sadly lacking in experience, and good will cannot make up for that! Time and again it happens to me, after embarking on a serious abdominal operation, to discover that the nurse present had never seen a laparotomy before. When I remark to her that something is not correct, she tells me quite frankly, "How could I know this? I never saw a laparotomy in my life!" Such admissions used to disturb me greatly and I was often in fear that something serious would happen; but I tried to make the best of the situation and, after much explaining and much waiting and sending for instruments that have been forgotten and changing sutures that had the wrong size, etc., etc., I manage to finish in two hours an operation that should not last more than one.

I would not say that the nurse's inexperience has been directly injurious to anyone in any case that I know of, but I contend that these delays unnecessarily prolong the anesthesia and operative shock and are directly detrimental to the patient. It is the unnecessary loss of time and the clumsy technique that are objectionable.

I am not a friend of those who operate by the clock and who try to make surgery a sport, and come and tell me that they have removed an appendix in six minutes while the previous record was six and a half minutes. But all the same, I find that in many cases with no special difficulty our operations are entirely too slow. About one-third of the time is consumed in sending for this and boiling that and trying needles, etc., etc. The days of pioneer surgery are past. Most operations have now become routine work and perfectly regulated affairs, with little place for unexpected developments and unforeseen complications. Therefore, there is no reason why the assisting nurse should not be well acquainted beforehand with all the details of this work.

Then a word about the surgeon's peace of mind. The feeling of insecurity, the necessity of constantly watching, of checking up the sutures and the needles and all the instruments that are passed to him, is an unnecessary hardship and a strain on his mind, when it should be left entirely clear and free to grapple with the difficulties of the case.

At the time that I was being trained as a young surgeon, the sister assisting at all major operations had filled that position for seventeen years, and I understand that they have kept her there ever since! She would put into our hand the right instrument or needle at the right minute, and this without having been asked for it, and without a word being spoken. She taught me how to do a gastroenterostomy and an intestinal resection, and I am not ashamed to admit it. I once heard the chief, who was in a happy mood that day, tell her, "Sister, some day I will let you do a gastroenterostomy."

All the surgeons in Europe and, I believe, also in the East have in their hospitals one or two of these trusted nurses to help them in their operative work. In fact, many men known for their brilliant technique owe much of their success to the admirable co-operation rendered by these clever nurse-assistants, and they would not think of doing anything worth while with a beginner, lest this would injure their reputation!

Why should it be impossible for the hospitals to make the necessary change in their staff? Each operating-room of consequence should have one or two graduate nurses under a two or three year contract, engaged especially to assist at all major operations and serious cases. The head sister or the head nurse would be the one to decide which are the cases requiring the presence of this experienced nurse, so as to make sure that such valuable assistance would not be wasted on small things. These positions could be given as a sort of reward to nurses who have shown a special aptitude for that work during their training, and who possibly would be willing to take a post-graduate course of a few months in this particular branch before taking up their new duty. It seems to me that this would be a fine field for a bright and intelligent woman anxious to engage in some responsible and eminently useful occupation.

For all that, the education of the student nurses would not have to be neglected; on the contrary, they would first act as aids to the first nurse and would have a chance to see a few major operations without bearing, themselves, the responsibility as they often do now; then later they could be left alone. I fully realize that we surgeons have a clear duty to contribute to the instruction of the pupil nurses, but I maintain that this should be done in simple cases first, in order to avoid any disturbance, and not in difficult or even critical interventions, as it now often happens. Then the rights of the patient have to be safeguarded, too. Most hopsitals make a good charge for the use of the operating-room, and for this the patient is supposed to be entitled to the best attention in every respect; and he is not getting it now, if he has to stay two hours on the table for an operation that with proper assistance could easily be finished in an hour.

I have talked to some of my friends about this matter and I am convinced that there is a demand right now for competent nurses to assist at major operations. I am certain that surgeons would

patronize the hospitals offering them such additional facility. Personally I would send my work there, regardless of previous affiliations, first, for the sake of the patient whose interest is paramount in this matter, and second, for the sake of our surgical technique, which ought to tend more and more towards perfection in every particular.

IMPROVEMENT FOLLOWING TONSILLECTOMY CLINICALLY EXPRESSED *

By HENRY H. LISSNER, M. D., Los Angeles.

In taking up the end result of tonsillectomy and its relation to the clinical manifestation of pre-existing disease in the short time allotted me to discuss this subject, it will only be possible to touch some of the more important points. The subject is a particularly far-reaching one, and I will briefly give my impressions of some of the most important clinical manifestations of absorption from the tonsils in relation to certain entities which have impressed me most.

The upper air-passages and the influence of infected tonsils upon the upper respiratory tract has been excluded from my discussion. If we then start with the neck, we have to deal with the influence of tonsillar infection upon the thyroid. It is a well-established fact that certain forms of toxemia or pus absorption, particularly from the tonsils, have a definite influence on the thyroid. This is evidently manifest in two types of cases; first, the adolescent or pre-adolescent type of thyroid, which is physiological in character up to a certain point, and the adult type which is pathological. Those who have had experience with the former type must have been impressed by the fact that following tonsillectomy the active thyroid symptoms are greatly diminished. That certain types of nervousness, headaches, change in temperament and disposition, which could be attributed to active thyroid, are immensely improved. In the adult type the tonsil plays as important a role from the standpoint of thyroid irritability as other focci of infection. Naturally, one must eliminate and search for other sources of possible thyroid irritation before considering the tonsils the sole source of infection. One case, in particular, illustrates this point:

A young woman with a vascular goitre, with marked thyroid activity and enlarged tonsils, had her tonsils removed. About four weeks after the tonsillectomy she developed an acute appendix, which was also removed, a ligation of the superior thyroid vessels was done at two sittings, following which the thyroid was removed. This young woman made a perfect recovery, and while she had been invalided for about two years, six months after the thyroidectomy she returned to her work with a normal pulse and with a decided improvement in her general condition.

That infected tonsils do have an influence on the production of thyroid symptoms and irritation, and that following tonsillectomy a definite amelioration of symptoms must be conceded, so that in dealing with thyroid disease of either adolescent or adult life, the role of the tonsil in its relation to the production or the increase of the symptoms due to definite thyroid disease must be considered.

With regard to the cervical adenopathies, and the definite types of painful glands, and the secondary enlargement of the bronchial glands, there is a definite improvement shown following tonsillectomy. The pain in the lymphnodes in the neck is due primarily to tonsillar infection, and that this form of irritation or infection does extend to the bronchial glands must be conceded.

This brings us to the bronchial manifestation of respiratory infection secondary to the tonsils. The forms of dry, hacking couch persistent with or without attacks of tracheitis or true bronchitis are frequently met with as the result of chronically inflamed tonsils. The degree of bronchial irritation depends upon the amount of absorption from the tonsils, and it is in direct proportion to the activity of the tonsillar infection whether it is an active tonsillitis or an acute exacerbation of chronic tonsillitis. Acute tonsillitis, per se, is not as frequently responsible for bronchial irritation as is the chronic variety, particularly that form of chronic tonsillar absorption which, by throat examination, shows a few enlarged tonsillar crypts and some scar tissue in the tonsils. Such tonsils appear harmless, but in cases of recurrent attacks of bronchitis, or, as the patient expresses it, "catching cold all the time," the removal of such tonsils is usually followed by a clearing up of the bronchial condition and a diminution in the size of the cervical and bronchial glands, when not complicated by tuberculosis.

In certain forms of heart disease the influence can be directly shown; not only is this true in children, but also in adult life. Types of irritable heart, tachycardia, definite arrythmia and myocardial changes are improved by the removal of the diseased tonsils. Where the myocardium alone is involved the improvement is much more pronounced than where the valves have been attacked. Endocarditis and pericarditis do follow as complications of acute tonsillitis, and where a diseased tonsil is removed in the interim following such an attack, the improvement of the heart is very much slower, and the permanent damage is less likely to disappear than when the heart muscle alone is involved. There seems to be a greater ability toward the heart muscle regeneration with less permanent damage resulting than where the endocardium or pericardium is affected.

In the gastro-intestinal tract the symptoms of nausea, vomiting, toxic diarrhœa and pain are usually much improved following tonsillectomy. However, where there is a focus of secondary infection, such as ulcer of the stomach or appendicitis, these conditions do not materially alter in character, but run the usual course independent of tonsillectomy. Naturally, there are a great many symptoms referable to the gastro-intestinal tract, such as pain, belching, so-called indigestion, eructations of food, hyperperistalsis, etc., for which the diseased tonsil has been held responsible, and

* Read before the Ear, Nose and Throat Section of the County Medical Society.

which very frequently remain after tonsillectomy, but in these cases they are still persistent from another source of irritation. In other words, the result of tonsillectomy and its influence on certain conditions of the gastro-intestinal tract is not as brilliant as it is in some other fields.

This same observation, I think, holds true for infections of the gall-bladder, as an infection once established from whatever cause in the gall-bladder, must be treated as a definite disease of that organ independent of its primary source. In gall-bladder infection there is a particularly definite etiology and it is often difficult to ascribe it to a direct tonsillar infection. The etiological factors are so numerous that it can only be ascertained by careful and painstaking investigation, both clinically and laboratory, as to whether or not the tonsils were the primary path of the infection.

Probably the most brilliant effect of tonsillectomy is seen in certain types of joint disease. One need only mention the acute arthritides, the most pronounced example of which is acute articular rheumatism, to note the influence of tonsillectomy on this particular condition. I would make this distinction, however, and tend mostly toward the general classification of arthritis, of which acute articular rheumatism is a form, and take up secondarily the other types of chronic arthritis as definite diseases of so-called arthritic nature.

Various theories are advanced and much discussion has been had in medical literature as to the etiology of certain forms of chronic arthritis. There are, however, definite cases in which the etiology can be directly traced to the tonsil. I have several of such cases in mind where cultures made from the tonsils have shown the same type of organism as was recovered from the joints of acute, septic arthritic cases which were not of the type of acute inflammatory rheumatism. Such cases following tonsillectomy show a decided tendency to improvement, and in that type of case, as compared to the rheumatic type, there remains behind definite joint changes which do not occur in acute inflammatory rheumatism. This type of arthritis even after tonsillectomy also shows a tendency to remissions, not perhaps as frequently as they would before, but they do occasionally light up in isolated joints which have been previously affected. In acute articular rheumatism, when the acute inflammation has subsided, there is no residue of joint involvement, and if the individual has escaped the heart complication of the disease, the tendency to recurrence is reduced to a minimum.

In certain forms of acute nephritis there are times when the condition can be directly traced to tonsillar infection. This is when a hemorrhagic nephritis follows an acute tonsilitis. In this type of infection the damage to the kidney is of a more permanent nature than is met with in the ordinary and more frequent form which is shown by albumen, a few casts, backache, and other milder symptoms. This type of toxic nephritis clears without leaving any permanent damage to the kidneys after tonsillectomy. Cases of multiple abscess of the kidneys naturally run a more chronic course, and leave in their wake permanent kidney disease. It must be remembered that not infrequently then the kidneys show the effect of tonsillar absorption, and the nature and permanency of the damage depends on the nature of the involvement of the kidney tissues.

In no form of disease, so far as the effect of tonsillectomy upon it is concerned, is the result as striking as it is in those forms of acidosis of toxic, rather than diabetic origin. I am firmly of the opinion that acidosis, particularly in children, is very much more frequent as the result of tonsillar absorption than we ordinarily think. This condition is met with in young children, and the cause of the illness of the child is usually put down as dietary indiscretion, or an acute intestinal upset. It starts with heaviness and drowsiness, and sometimes goes into a mild coma or delirium with fever, nausea, vomiting, headache and a general lassitude. The children are fretful when disturbed for examination, peevish and hard to manage. The general physical examination is negative. Such attacks occur at intervals. The child is usually given a physic, the diet cut down, the fever causes it to drink an abundance of water, and in three or four days the child recovers. An examination of the throat of these children will show tonsils not as frequently acutely inflammed as with subacute and chronic inflammation. The tonsils are sometimes large with prominent crypts which may or may not be blocked; sometimes rudimentary in character and buried, but still showing the evidence of chronic inflammation. The urine shows acetone and diacetic acid, but the blood sugar is usually within normal limits. Tonsillectomy in such cases works an absolute cure. In fact the result in this type of case is almost spectacular. These children pick up, grow, gain in weight, become lively and normal in every particular.

There still remains to be discussed the influence of the chronic tonsils on the so-called neuralgias, neuritis, headaches and other indefinite types of nervous manifestations which are attributable to infection. These conditions respond very quickly to tonsillectomy. Such cases are recognized by severe headaches, either unilateral or bilateral: if unilateral assuming the type of supraorbical neuralgia, if bilateral being expressed by severe pain, fullness, pressure over the frontal or parietal regions accompanied by severe nervous manifestations such as irritability, sometimes a definite mania as was witnessed in a case observed by Dr. Montgomery and myself, sometimes accompanied by nausea and vomiting with head pain, fleeting joint symptoms, palpitation, and an irregular heart. These cases usually materially improve without recurrence following tonsillectomy.

Just a word in conclusion about cultures in the bacteriological studies of the tonsils. A great deal of information can be obtained by tonsil cultures in those cases where the tonsils are manifestly inflammed or show evidences of acute or subacute inflammation. A culture taken from the tonsillar crypts rather than from the surface

of the tonsil will not infrequently show hemolytic streptococcus and staphylococcus, or some other type of organism which would be of sufficient virulence to cause absorption and still not produce acute local evidence of its presence. It would seem to me worth while to culture innocent looking tonsils to determine whether or not they may be harboring such a germ.
806 Brockman Building.

TIC DOULOUREUX *

By HOWARD C. NAFFZIGER, M. D., 291 Geary Street, San Francisco, Cal.

In the treatment of a series of cases of tic douloureux in the neuro-surgical service at the University of California Hospital, it has become evident that certain misconceptions regarding this disease and its treatment are prevalent.

Operations upon the gasserian ganglion are, in the minds of the profession, highly dangerous procedures followed by great deformities. Of all the major operations in surgery there are few, if any, which carry a lower mortality than the radical operation for the cure of tic douloureux. The risk to the patient is not to be compared to the risk assumed in operation upon the gall bladder and stomach. The mortality in radical operations for tic douloureux is reported from many of our leading clinics. In the Johns Hopkins Hospital service, the Peter Bent Brigham service at Boston, the University of Pennsylvania Hospital service, the Mayo Clinic and the University of California Hospital service in 1920, over 150 operations have been done, with but one death, and this from a cause not directly connected with the operation. Cushing has reported over 300 consecutive cases without fatality.

The results obtained from the operation are generally quite satisfactory. Careful preoperative diagnosis is the first essential, and the Gasserian operation should be limited to appropriate cases. If the operation is performed for all types of intractable pain over the face, the results will be far from satisfactory. In making a diagnosis of tic douloureux the character of the pain is the deciding factor.

What, then, is the character of the pain? It is sharp, jabbing and lightning-like. It occurs in short paroxysms, and then stops completely. There is no continuous pain. The recurrence of the paroxysms may vary from a minute to hours, but between paroxysms there is complete relief.

The pains are characteristic of true tic douloureux. While other features of the disease may need a word, the characteristic pain is the determining factor in diagnosis, and if radical operations are confined to those who have it in great severity, the results will be gratifying.

The cause of this disease is not yet fully determined. Ascending neuritis and chronic inflammation of the Gasserian ganglion have most supporters. In the literature the average ages of onset given is between forty and fifty years. It rarely appears before thirty years, and in our series the average age has been sixty-two years. The cases are about equally divided between the sexes. The right side of the face is more frequently involved than the left. Bi-lateral involvement, while not rare, is infrequent. It is exceedingly rare for the ophthalmic division to be first involved. The favorite sites are in the infra-orbital or inferior dental nerves. No authentic cases of tic douloureux have been cured by removal of teeth or treatment of sinus diseases. In tic, trigger points are common. The slightest touch or movement of these areas initiate an attack. These areas are often about the angle of the mouth or also of the nose. In certain patients the pain may be limited to the division of the nerve primarily affected. More frequently it spreads to other branches.

The paroxysms of pain recur at varying intervals from less than a minute to a part of a day or several days. Complete remissions of months, or occasionally years, are not uncommon.

Pain is always severe. A recent case in our clinic was that of a man, seventy years of age. He was found lying on the steps of the hospital with his few belongings in a burlap sack. His beard had been unshaven for weeks, face unwashed, hair matted together, and body emaciated from long inability to take food. He was unable to speak, eat, or touch his face. The fear of the approach of anyone, of a touch or a draught of air, and his terror-stricken appearance made one wonder how he had escaped morphine addiction or self-destruction, to which these patients often turn for relief.

For pains occurring over the face in the distribution of the fifth nerve true tic forms one group. In this we have classified those cases having pain of the type described above. Cushing has divided these into major and minor neuralgias. The etiology is as yet obscure, and since in essential points the disease is the same and varying only in degree of severity, we have preferred to group them as mild cases and severe cases, and on this basis to vary our treatment.

The radical operation is indicated only on the severe cases. Removal of the Gasserian ganglion has, of recent years, entirely given way to the simpler and less dangerous procedure of severing or avulsing the sensory root. Permanent loss of function of this cranial nerve is a small price to pay for relief in extreme cases. In those of less severity the disturbance caused by the loss must be weighed against the degree of pain the patient is having, and the possibility of satisfactory relief by a simpler surgical procedure. This decision must be made by the surgeon. To each patient, the pain of his particular tic is most severe. He is unable to foretell how much the feeling of numbness or stiffness, which follows section of the sensory root, will disturb him. The surgeon must judge, bearing in mind the severity of the pain, its character, and the temperament of the patient. Paresthesiaes following the radical operation are not uncommon and with fear of pain forgotten, the patient may eventually come to believe that the pain was less troublesome than these odd sub-

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jective feelings. With such considerations in mind judgment is often difficult.

While the operative risk is small, an operation which leaves the patient with unpleasant paresthesia is not a satisfactory one. When there is any question in the surgeon's mind as to whether he is dealing with true tic or some other type of pain, radical operation should be deferred and some measure adopted which is not permanently destructive to the nerve. Of these procedures alcohol injections of the nerve trunks and neurectomies may be considered. Of the nerve fixatures used, alcohol has been generally adopted, and has completely superseded the use of such agents as osmic acid. Both alcohol injections and neurectomies give but temporary relief. The injections are limited in their use to the second and third divisions of the nerve. When successful they give entirely satisfactory relief for a variable period—usually a few months to a year. There are definite risks associated with their use, and apart from the risks there are other disadvantages. The best that can be said for them is that when successful they give temporary relief and offer a clinical test of the results from blocking of the nerve. The disadvantages are, the injection is a painful performance. It is customarily done without general anesthesia, in order that the pain experienced may give indication when the nerve is pierced.

Serious complications are too common. Even in experienced hands the injections are often unsuccessful. In inexperienced hands, injections are not only more frequently unsuccessful, but complications are common. At the University Hospital one patient has come for treatment, having lost an eye as the result of alcohol injections. Corneal ulcers are common. Sloughing of the middle ear, persistent tinnitus and dizziness have been seen. A recent case with a mild tic has come to us with persistent diplopia, following an attempt to inject the first division. For such reasons it is our feeling that alcohol injections are to be considered in themselves major procedures. They have their place in surgical therapy, but are not to be undertaken inadvisedly.

Regarding injections of the Gasserian ganglion itself, this measure may be dismissed on the ground that the risk of it is greater than section of the sensory root of the ganglion.

Most surgeons favor the alcoholic injections of the second and third main divisions of the fifth nerve rather than neurectomies, on the ground that all the branches of these divisions are in this way blocked and no scar remains.

Peripheral neurectomies are, of course, not to be done except when the pain is entirely limited to an accessible branch. In such they have certain advantages, and have seemed to us to be the treatment of choice. It is recognized, of course, that the relief is temporary, but this is also true of the injections. It offers the same clinical test as to whether relief is obtained or not. Although temporary in effect, it may be all that is necessary in the very old and feeble. As to the scar, this has no significance, and if the operation is properly performed will be barely visible.

The advantages are that an anesthetic may be used. The operation is a minor one, and there is no question of locating the nerve as in blind punctures. The relief obtained is certain; it averages longer than after injections, and without the same dangers. When one is dealing with one of the severe cases of tic there can be little justification in postponing the radical operation and subjecting the patient to repeated painful temporary measures. The mortality of the operation for permanent relief is certainly not greater than one or two per cent in experienced hands.

The complications of the operation deserve comment. The idea seems widely dissemminated that marked deformity of the face, hideous scars and facial paralysis follow the operation.

One of the complications of the operation is a peripheral facial paralysis. It is not, however, of frequent occurrence. There seems to be two types, one in which weakness of the facial muscles on the operated side appears on the second or third day after operation; gradually increases until it is complete or nearly so. It gradually clears, and the muscles are back to normal in about three weeks.

There is a second type of peripheral facial palsy occurring on the same side, which may be evident at the conclusion of the operation. We have had one of these in our series. It appeared at once after an avulsion of the sensory root. It was complete and remained so for six months, since which time it has gradually but steadily improved. The recovery to date is perhaps 50 per cent. We have had no permanent facial palsies. The reason for the appearance of them is not known; the operation is, of course, not near the facial nerve; the skin incision is well above it, and the intracranial work is in the middle fossa. Stripping of the dura from the petrous bone followed by hemorrhage about the seventh nerve, and hemorrhage into the canal carrying the nerve have been suggested as causes. Adson advanced the idea that damage within the pons following the avulsion of the fifth root is accountable. Against this is the fact that facial palsies occur also after section of the root without avulsion. The cause of the palsy is as yet unsettled. Fortunately it occurs infrequently. Other complications are corneal ulcers followed by opacities.

During the year 1920, on the division of Brain Surgery at the University of California Hospital, ten cases have had operations on the Gasserian ganglion for the relief of tic douloureux. There have been no deaths. The average age in this series is sixty-two years. We have had one complete peripheral facial palsy follow operation. Return of function in the paralyzed muscles began in six months and is continuing. In the same case there was a corneal ulcer, now healed, which has left a considerable opacity, but still permits of a useful amount of vision in the eye.

One other case had a small corneal abrasion which healed without any opacity.

Corneal ulcers are usual in cases having facial palsy. The lack of sensation in the eye renders slight injuries or irritation inappreciable to the patient, and the dryness of the cornea permits par-

ticles to adhere. If these are combined with inability of the lids to close, injury is unavoidable. The danger of corneal complications seems to decrease after the first few weeks. Another postoperative complication is hemorrhage into the middle ear. This is likewise uncommon. Accurate figures are not available, because it is rarely mentioned in the literature and is not generally appreciated.

Unilateral paralysis of the muscles of mastication was formerly the rule. At present it is possible frequently to spare the motor root.

SUMMARY

All cases of intractable pain over the face are not tic douloureux.

This diagnosis should be confined to those having heavy paroxysms of the type described, but without any continuous pain.

Temporary relief and diagnostic information may be obtained from alcohol injections and neurectomies. The latter have a valuable place in treatment. For permanent relief the radical operation of severing the sensory root is the preferable procedure. It involves but slight risk either on the score of mortality or complications.

PLASTIC SURGERY IN AND ABOUT THE EYELIDS *

By RAYMOND J. NUTTING, B. S., M. D., Oakland, Cal.

Plastic surgery in and about the eyelids finds its chief indication in the relief of those deformities due to the contraction of cicatrices from burns; deformities resulting from defective congenital development; loss of parts resulting from injury, which has been especially brought to our attention on account of the late war; removal of malignant growths; the destructive ulceration from other general diseases; or loss of function of the lids from lesions of the third or seventh nerves.

One should have a thorough knowledge of the surgical anatomy and histology of the lids and surrounding parts before doing plastic work in this region, so I shall not take any of your time by describing same.

A guarded prognosis should be given in most plastic work about the eyelids, and it is of the utmost importance that a good photograph be taken before and after each operation, in order to avoid undue criticism by the patient, or his friends. There is no question of the value of such photographs for the physician's records and for future reference.

In general, whatever method one uses, whether it be pedunculated flaps, grafts of different types, the epithelial inlay or outlay, it is very important that great care be used in obtaining facial symmetry—symmetry of features, on the one hand, and symmetry of movement, on the other. Great care must be taken also in the minor details, such as accurate approximation of skin edges; on the even application of grafts in a state of normal skin tension; and, in most cases, a gentle pressure should be evenly maintained to prevent the collection of any exudates, and insure the proper nourishment of the grafts. Lastly, *asepsis* and a properly prepared field, and not too much speed are important points in the operation.

There are broad general rules governing repair of cicatricial tissues, whether it be of a distorted lid or a contracted socket. Every such condition presents problems peculiar to itself, requiring independent study and treatment, so it is very difficult to give all these methods of treatment in a paper at this time. Some operators prefer a Wolfe graft; others, pedicle flaps; and others, Thiersch transplants, whether epithelial inlays or outlays in certain cases, or simple grafts as the case may present itself.

An operator is naturally in favor of that operation from which he has obtained the most satisfactory results, but possibly in selected cases just as good a result can be obtained from one method as from another.

There are some conditions which are especially adapted to the epithelial inlay or outlay, such as extensive burns about the lids, face and forehead, resulting in extensive cicatrices which would make a pedicle flap impossible. Great progress was made in this work during the late war, by Esser, Gillies, Waldron, Risdon and others, who have all done great work in plastic surgery about the face. As it will be impossible to take up buried skin grafts for correction of obliterated cul-de-sacs and orbit in the time permitted, I will limit my remarks to pedunculated flaps and simple Thiersch autodermic grafts.

The replacement or readjustment of tissues by fashioning and mobilizing flaps of adjoining skin should be chosen whenever possible, and is especially useful in restoration of the lower lid.

The pedunculated flap has its greatest usefulness in restoration of the lids or canthi, especially where there has been great loss of tissue. It is also used where the nutrition is poor, which, of course, would be fatal for a skin graft. The advantage of pedicle flaps lies in their good vitality, which has the effect of making them more resistant to infection; and, secondly, these flaps do not shrink with time. Their only disadvantage is that they leave a linear scar, but this, it is true, becomes less conspicuous as time goes on, and, if proper care is taken these scars eventually can be scarcely seen. It is also very important that the base be not too narrow and not more incisions than are absolutely necessary be made. The skin edges should be very carefully coaptated, strict asepsis carried out, and all hemorrhage stopped. The wound should be dressed with a dusting powder, such as aristol, covered with perforated rubber tissue or dental wax, and an even pressure-bandage applied.

The Thiersch method, on account of its simplicity, is the method of choice about the lids. Thiersch grafts are most successful when support is not needed, particularly in the upper lid, but we have all seen good results from grafts in the lower lids in special cases.

The grafts are usually taken from the arm or inner side of the thigh, where very few hairs are found and the skin very thin like that of the lids. The part to be excised is shaved and scrubbed

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carefully with soap and water, sponged with ether and alcohol, followed by bichloride solution, excess washed off with salt solution and the area covered with sterile gauze-dressing moistened with normal salt.

In cutting the graft, the knife and skin area should be coated with sterile vaseline and the excess wiped off. This step eliminates the tendency of the skin to move with the knife. Dr. Walter Parker, has been using this method for years, and the use of vaseline has not been found to interfere with the healing process.

The surface to be grafted requires very careful preparation. Hemorrhage should be entirely controlled, and the surface allowed to glaze over. The graft retains its vitality so long that the length of time between the cutting and application need not be considered. When the graft is once in place it should be disturbed as little as possible. The graft should cover the entire surface, as well as slightly overlap the skin margins, or any possible contiguous grafts. There should be no tension in any direction.

The most important point in all skin grafting is overcorrection, and this should always be done. In repairing the skin of either the upper or lower lid, after the wound has been properly prepared, the lower lid should be drawn up over the upper, or vice versa, as the case may be, far enough to smooth out the grafted area and fastened by sutures passed through the lid margin so that they will not interfere with the wound. They also should be fastened above in the forehead or below, as the case may be, to hold the lid in place.

METHOD OF DRESSINGS

1. In advantageous surroundings and for small grafted areas the open-air treatment has the advantages of lessened tendency for the graft to become displaced by the dressings. After the graft has been placed in position, aristol is dusted over the edges, and no dressings applied other than for protection. Rolls of gauze are placed around the grafted area in such a manner that they do not interfere in any way with the edges. This method is suitable only on small flat surfaces where there is little danger of serous exudates lifting off the grafts. Ideal patients who will be quiet and realize the importance of a good result contribute to the success of this method.

2. Personally, I prefer the closed method, since we have been using dental wax for covering the grafts. An impression of the area to be grafted is made with sterile dental wax. The Thiersch graft is placed around, or over, the wax, and then inserted or placed over the denuded area. The graft, under suitable conditions, may be placed and then covered with the dental wax. The wax is then carefully covered by a dressing held in place by adhesive, and the whole covered with a well-placed roller bandage.

The dressings can be removed on or about the fourth day. The wound is carefully cleaned with pledgets of cotton or applicators moistened with boric acid or bichloride solution, being very careful not to remove the grafts. If the graft looks nice and pink, and no secretions are present, the dressings may be discarded, the wound dusted over with aristol, and the open-air treatment used. Later, as the grafts begin to dry, it may be advantageous to cover them with sterile vaseline. About this time, or a little later, massage of the grafted area and surrounding skin is very helpful, as it also tends to soften the graft and renders it more movable, and it assumes more rapidly the appearance of the surrounding skin.

CONCLUSIONS

1. A photograph should be taken before and after each operation.

2. Strict asepsis and a properly prepared field.

3. Pedunculated flaps should be used wherever possible.

4. Use the method with which you are most familiar.

5. The Thiersch method for grafts is the one of choice around the eyelids on account of its simplicity.

6. The closed method of after-treatment has more advantages for most cases.

7. Always aim at overcorrection in all graft transplants.

8. The use of vaseline makes cutting of graft much easier.

9. Keep graft from becoming too dry afterward.

THE NEW JOURNAL

The California State Journal of Medicine for many years has justly stood very high in the annals of state journalism. It has grown so that it is not possible to make any further expansion without changing the type of binding. With the January issue the Journal comes out with an entirely new cover and a new type of binding. With this new binding and method of covering, we enter the field of larger journalism from a mechanical standpoint.

While for economic reasons, the first few numbers of 1922 will be limited to 96 pages and cover, it is expected that beginning with the May number we will have 108 pages, and we hope to enlarge to 116 pages before the end of the year. This advance, of course, will increase somewhat the expense of the Journal, which we hope to offset by an increased income already provided for from members and by a slight increase in the space devoted to advertising.

The editor invites and welcomes correspondence and constructive criticism of any character tending to make the Journal better.

THE DIAGNOSIS AND TREATMENT OF INTRACRANIAL HEMORRHAGE OF THE NEW-BORN — REPORT OF A CASE *

By EDWARD B. TOWNE, M. D., and HAROLD K. FABER, M. D., San Francisco.

Important advances have been made, in recent years, in the knowledge of the causes of intracranial hemorrhages of the newborn, and in the diagnosis of the different varieties. Treatment has also made notable progress in some forms, particularly in those due to a general hemorrhagic diathesis and in those occurring in the posterior cranial fossa. The object of this paper is to attempt to correlate pathology and symptomatology with the various methods of treatment. A case is reported that illustrates successful treatment of a lesion that was correctly localized, as well as needless surgery due to failure to apply all the possible diagnostic methods.

Etiology.—Recent papers by Warwick [1] and Rodda [2] have reviewed the theories of the causes of intracranial bleeding. The hemorrhages may be divided into two main classes, those due to trauma incurred in the passage of the child through the birth canal, and those due to disease of the child. The first class is purely traumatic; the second has no relation to labor, and the most frequent underlying cause is the hemorrhagic diathesis. Green [3] was the first to appreciate the importance of the second factor. Warwick demonstrated the condition in eight of eighteen cases of intracranial birth hemorrhage that came to postmortem examination.

Diagnosis.—An attempt must be made to answer two questions before these cases can be intelligently treated. First, is the intracranial hemorrhage of traumatic origin, or is it one manifestation of the hemorrhagic diathesis? Second, what is the location of the hemorrhage? Neither question can be answered in every case. If the infant shows evidences of multiple hemorrhages, such as a cephalohematoma, petechiæ in the skin, or bleeding from one of the body orifices, the diagnosis of hemorrhagic disease is easily made. But these signs do not always appear. Five of Warwick's eight cases of intracranial bleeding caused by the hemorrhagic diathesis vomited blood, but the other three showed no clinical evidence of the multiple clots that were found post-mortem. Determination of the coagulability of the blood has proved helpful in making the diagnosis. Rodda [4] determined the curve of coagulation and bleeding times in the first few weeks of life, and showed [2] that in hemorrhagic disease of the newborn the times were prolonged.

The second question is of greater importance, for the selection of the proper method of treatment depends on correct localization even more than on differentiation between the traumatic and diathetic types. Seitz' [5] localizing classification is the most useful. He divided the hemorrhages into three groups—the supratentorial, the infratentorial, and the intraventricular. Various combinations are found; thus in Warwick's eighteen cases, six had hemorrhage over one cerebral hemisphere, three over cerebrum, cerebellum and in the dura, three over cerebrum and cerebellum, one over cerebrum, cerebellum and in the ventricle, one over cerebellum, two in the dura alone, and two in the ventricle alone. Her series emphasizes the fact that the most common site is supratentorial, for thirteen of these eighteen cases had hemorrhage over the cerebrum alone or in combination. Cushing [6] called attention to the unprotected pial veins as they travel from the cortex to the longitudinal sinus as particularly liable to injury from overlapping of the parietal bones during parturition. In attempting to diagnose the location of the bleeding, it is proper to consider the odds as in favor of the source being partly, if not entirely, the pial veins that empty into the longitudinal sinus.

The symptoms may be clear-cut and localize the trouble beyond question, but frequently they are confusing, or even misleading. Eliminating those that cannot be resuscitated, most patients cry and appear more or less normal for a time. After an interval of hours or days, symptoms appear. The infant may first refuse the breast, or cry continually, or be drowsy, or show increased reflex excitability, or have sudden attacks of asphyxia with respiratory disturbances. The fontanelle becomes full and tense, and there are convulsions in practically every case. In attempting to evaluate these symptoms it should be remembered that the largely non-medullated brain of a new-born infant makes him little more than a spinal animal, who will live under most adverse conditions provided the medullary centers are not too much implicated. So a large hemorrhage over the cerebrum may give no signs beyond those of increased intracranial pressure, while a small hemorrhage below the tentorium may be rapidly fatal. Disturbances of respiration with cyanosis, generalized convulsions and rigidity of the limbs point to infratentorial bleeding; while convulsions involving first or only one side, or palsies of face, arm, or leg, or lateral deviation of the head or eyes indicate a supratentorial lesion. There seems to be no way to detect an intraventricular hemorrhage from the symptoms.

Spinal puncture gives valuable evidence in localizing the bleeding. When the hemorrhage lies over a cerebral hemisphere the fluid contains little blood, and the withdrawal has no effect on the progress of the case. On the other hand, an infratentorial hemorrhage gives fresh blood, usually in considerable quantity, and removal is frequently followed by temporary or even lasting disappearance of cyanosis, disturbed respiration and convulsions.

Subdural puncture as a diagnostic procedure was suggested by Henschen [7] and, apparently independently, practiced by Gilles [8]. A spinal puncture needle is introduced at the lateral angle of the great fontanelle and passed under and parallel with the parietal bone. Henschen recommended this puncture to confirm the diagnosis of a supratentorial hemorrhage and to prove which side was involved. This is unquestionably a most valuable method, provided it does no harm. If there is a

* Read before the Fiftieth Annual Meeting of the Medical Society of the State of California, Coronado, May, 1921.

subdural clot near the longitudinal sinus, a carefully directed needle need not damage the cortex. But, remembering that the central fissure lies very little posterior to the fronto-parietal suture in the newborn, one wonders whether a negative exploration might not lacerate the motor area. In Case 2 of Green's second paper [9] a negative puncture gave no ill results. Hemorrhage into the lateral ventricles can be confirmed or ruled out by ventricular puncture through the outer angles of the great fontanelle, but this procedure also carries some risk of injuring the motor cortex.

Visual inspection of the dura under the fontanelle after incision of the scalp enabled Murphy [10] to detect clots over the cerebral cortex on both sides of the longitudinal sinus. This apparently neglected method ought to prove of great value, for it avoids the dangers of subdural puncture and requires only a short scalp incision, which may be extended for an osteoplastic exposure on either side.

Three cases reported by Potocki and Levant [11] illustrate the difficulties of diagnosis, even with apparently definite clinical localizing signs, without the help of fontanelle inspection or exploratory puncture. The first two cases showed motor signs pointing to a clot over one cerebral cortex, but both had intraventricular hemorrhage only. The third case had similar signs and was diagnosed hemorrhage into the ventricles, but at post-mortem examination no intracranial hemorrhage of any kind was found. Subdural puncture and fontanelle inspection would have been negative throughout, but ventricular puncture would have made possible a positive diagnosis in the first two cases.

Treatment.—Intracranial hemorrhages have been treated by four methods: (1) spinal puncture, (2) subdural aspiration or drainage, (3) removal of the clot through an osteoplastic window, and (4) measures designed to increase the coagulability of the blood.

(1) *Spinal Puncture.*—This was first proposed and practiced by Devraigne,[12] who reported a case in which the convulsions stopped, leaving the infant in apparently normal condition. Dutreix [13] recorded five cases, of which three recovered and two died following removal of bloody fluid by spinal puncture. Henschen [7] saw that spinal puncture gave good results in infratentorial, but could do not good in supratentorial hemorrhages. Green's [9] Case 1, a typical infratentorial hemorrhage with apnoea, cyanosis, nystagmus and convulsions, cleared up with repeated removals of bloody cerebrospinal fluid and appeared normal on the fourth month. Brady [14] treated three cases with spinal puncture. Two were apparently normal at three years and fourteen months, but the third continued to have convulsions and developed spasticity; post-mortem examination at nine months showed adhesions and flattening over a small area of the cerebral cortex. Foote [15] had six recoveries and one death in infants showing respiratory distress and blueness, with or without convulsive phenomena, treated by spinal puncture and subcutaneous injection of horse serum or thromboplastin. One detailed case was an instance of hemorrhagic disease of the new-born. Good results are also recorded by Lippman [16] and Vaglio [17]. Spinal puncture, on the other hand, has had no influence in numerous cases in which it was used only for diagnostic purposes, and post-mortem examination has usually shown a clot over the convexity of the cerebrum. Thus Rodda's [2] Case 5 had a large hemorrhage over the entire right hemisphere, as well as smaller ones in the pericardium and the spinal canal, and died from intracranial pressure in spite of spinal puncture and repeated subcutaneous injections of whole blood. Rodda recognized that spinal puncture gave results only when the bleeding was below the tentorium.

(2) *Subdural Aspiration or Drainage.*—If aspiration through the great fontanelle is used as a therapeutic measure, it amounts to the same thing as drainage at that point. Gilles [8] so used it, but his patient continued to have convulsions and died at nine months. Henschen [7] advocated it in mild cases, and Green [3] thought that if considerable blood were aspirated operation might be postponed or omitted. Murphy [10] was the first to evacuate a hemorrhage over the cerebral cortex through a short linear incision. He first exposed the anterior fontanelle and saw through the dura evidence of hemorrhage on both sides of the sinus. After turning down an osteoplastic flap and removing the clot, the patient's condition seemed to contraindicate a similar procedure on the opposite side, so the fluid blood was partly evacuated through a short incision lateral to the longitudinal sinus. The infant made a good recovery, and the cerebral condition was considered normal when it died of gastro-enteric disease at five weeks. Simmons [18] added rubber tissue drainage to Murphy's evacuation of a subdural clot through a short incision. He reported two cured cases, one of which gave an excellent result thirteen months after bilateral drainage. He saw the danger of adhesions from the portion of the clot that was not removed, but said that his operation was rapid, easy, and justified by the results. He thought that neither case would have survived Cushing's osteoplastic procedure, which he recognized as the more thorough and desirable method. Green [3] recorded a case so treated by Murphy, in which post-mortem examination showed a clot overlying the cerebral convolutions and extending down into the longitudinal fissure. Cumston [19] and Green [9] have each reported a good result with the Simmons operation. Green felt that incision and drainage gave adequate relief, and was preferable to the osteoplastic operation.

(3) *The Osteoplastic Operation.*—In 1897 Chipault [20] said that the usual clot over the upper motor cortex was a surgical problem, and suggested that its removal would be easy and ought to give good results. Cushing [6] was the first to successfully evacuate a clot through an osteoplastic window. He [21] reported in 1908 that he had thus operated on nine cases, with four apparently perfect recoveries. Seitz [22] and Meara and Taylor [23] reported two cases in which clots over the cerebrum were removed, but both died, and post-mortem examination showed that there was also infratentorial bleeding. Murphy and Torbert [10] had a recovery following evacuation of clots by Cushing's procedure on one side, and through a

short dural incision on the other. Hubbard's [24] case, a fatality, is not easy to classify. He found clots over both cerebral hemispheres, probably through small decompressive openings, and cortical laceration resulted from attempts to enlarge the bone defects. Bailey [25] removed a clot from the motor cortex, but could not suture the dura or bring the bone flap into position because of cerebral herniation. His patient had a facial palsy and a flaccid arm on the thirtieth day. Strachauer [26] has done four craniotomies for cerebral hemorrhage in infants; one died at eight weeks, and the other three were seemingly normal. Rodda [2] reported two of Strauchauer's cases in more detail. One (Case 8) was a typical Cushing procedure, the other (Case 9) was a "decompressive operation," which apparently did not locate the clot, but which was followed by a good result.

The osteoplastic operation has been done fifteen times (Cushing 9, Seitz 1, Meara and Taylor 1, Murphy and Torbert 1, Strauchauer 1, Bailey 1,

Fig. 1. Lateral view of head at nine months, to show brachycephaly

Towne and Faber 1), with eight recoveries. Two other cases of Strachauer's and one of Hubbard's cannot be classified, because of lack of detail.

(4) *Measures Designed to Increase the Coagulability of the Blood.*—Rodda [2] showed that delayed coagulation and bleeding times can be reduced to normal by repeated subcutaneous injection of whole blood, and he felt that this reduction was essential prior to surgical intervention. In two cases successfully operated on by Strachauer, Rodda thought that the blood injections added to the chances of surgical success. Foote [15] had six recoveries in seven cases, treated by spinal puncture and injection of horse serum or thromboplastin.

Case Report.—Male, born July 11, 1920, at full term. The confinement was attended by a Japanese midwife. The mother was in labor ten hours, and delivered herself without assistance. At a later date pelvic measurements, for which we are indebted to Dr. A. V. Pettit, showed moderate lateral contraction of the inlet. The child cried immediately after birth, and was said to be a very strong baby by the midwife. He nursed and appeared well until the third day, when he began to vomit and to refuse nourishment. On the sixth day, July 17, the baby entered hospital as a feeding case.

Examination showed a markedly dessicated infant weighing 2740 gms. The pupils were equal, the eyes and head were turned to the right. The anterior fontanelle was tense and bulging. There was a left facial paralysis, with no motion of the mouth on crying, and inability to close the eyelids. The arms and legs were spastic. Temperature, 98.6°; pulse, 80. That afternoon he had a general convulsion lasting about ten minutes, with cyanosis and rhythmic respiration. On July 18 the pulse was 130, respirations were regular, and the color was good. Attempts to feed with a dropper being unsuccessful, gavage was used. Slight twitching of the left arm was observed twice. A subcutaneous injection of whole blood was given. July 19, spinal puncture gave 2 cc. of straw-colored fluid. Most of the food given by the tube was regurgitated. July 20, the child was somnolent. Aspiration of the left lateral ventricle through the left

Fig. 2. Appearance at nine months. Note that the finger movements are not restricted

angle of the fontanelle gave 2 cc. of slightly reddish fluid. Supraorbital pressure did not make him cry, but caused him to move the right face, arm and leg. A diagnosis of hemorrhage over the right cerebral hemisphere was made.

July 21. Operation. The child was wrapped in cotton and lightly etherized. The right parietal bone was turned down in an osteoplastic flap. The dura was tense, immobile and deep blue in color. A flap of dura was reflected and a clot, 1.5 cm. thick, was removed from the cortex with wet cotton swabs and irrigation. The clot extended to the falx, over the frontal and occipital poles and over the temporo-sphenoidal lobe, thinning as midline became more distant. It was partially removed from under the bones with spoon and irrigation. Near the midline and toward the anterior end of the bone opening a large bleeding pial vein was ligated. After removal of the clot the brain still bulged markedly through the opening in the dura. The dural flap could not be brought back into place, and an attempt to swing it up by a plastic incision did not prove successful. The head was lifted off the table with skin clips placed about

the outer margin of the scalp incision. This manoeuvre allowed the brain to drop back into the collapsible cranium so that the dura could be sutured in place. The pericranium and scalp were closed without drainage. Twenty-five cc. of whole blood were given subcutaneously. Following operation the baby began to take his feedings better, and the weight increased to 3200 gms. on July 29. Blood was given subcutaneously on July 22 and 30. The palsy of the left face cleared up rapidly. The conjugate deviation of the eyes, spasm of right neck muscles and rigidity of left arm and leg disappeared gradually, until on July 29 a clenched left hand was the only evidence of right cortical irritation. The spasticity of the right leg and arm showed no diminution. It was thought that a smaller subdural clot lay over the upper portion of the left cerebral hemisphere.

Second operation, July 30. The left parietal bone was turned down, showing a normally colored dura. A small incision at the upper aspect of the defect allowed normal cerebro-spinal fluid to escape. There was no hemorrhage. Closure. In four days after the second operation the right-sided spasm disappeared entirely. He took his feedings well, and after a drop to 3000 gms. he gained weight steadily, going to 3400 gms. on August 19 when he was discharged from the hospital. He seemed of normal intelligence, taking the bottle well and noticing lights and motions. There was a tendency to keep the fingers clenched in the palms of both hands, but at times they were relaxed; and as the left cortex was known to be normal this was thought to be of no significance. In October, 1920, when three months old, he weighed 5050 gms. He no longer showed clenching of the fingers. In February, 1921, at seven months, he weighed 6125 gms. The head was high, wide, and short in the antero-posteror diameter. The biparietal diameter was 12 cm.; the suboccipito-bregmatic 12.5 cm. He did not sit up, or hold the head up well. He recognized his parents, and responded to lights and moving objects, but did not turn promptly to loud sounds. It was felt that he was normal mentally, as far as could be told at that age, but perhaps slightly retarded in muscular control. In April, 1921, at nine months, the child was well nourished and active. (Figs. 1 and 2.) The brachycephaly was quite marked. He played with toys, reacted quickly to moving objects and sounds, sat up alone, and made sounds but no words. No motor or sensory abnormality could be made out. There had been no convulsions.

Discussion of Case.—In this instance there was no difficulty in making the diagnosis of a clot over the right hemisphere, for the symptoms were unusually clear-cut; tense fontanelle, deviation of the head and eyes to the right, palsy of the left face and spasticity of the left limbs, old blood in the cerebro-spinal fluid, and general convulsions. The pathology underlying these signs was accurately forecast, and the only surprising fact was the great size of the clot. The identification of a ruptured pial vein near the longitudinal sinus as the probable source of the bleeding, though noted in Cushing's case 4 at autopsy, has not been previously reported as an operative finding. A matter of considerable technical interest came up in the first operation. Because of bulging of the cortex it was impossible to suture the dural flap in place. Cushing noted this difficulty, but he attributed it to edema of the brain, and advised counteracting it by lumbar puncture. In our case it did not appear possible that lumbar puncture could reduce the tension sufficiently to allow closure. But cerebral edema could have played only a minor role, for the event proved that the cerebral extrusion was largely of mechanical origin. The cranium after closure of the suture lines is a solid box, but in the newborn infant it will collapse if a window is cut through the dura mater. When the baby's head was gently lifted from the table by the edges of the scalp incision the brain dropped back enough to allow closure of the dural incision. It seems probable that this simple manoeuvre will, in other cases, solve the one technical difficulty of the operation. A scalp tourniquet is, of course, inadvisable in these cases.

The second operation did no apparent harm, but it was quite unnecessary. The diagnosis of a clot over the left hemisphere was made on the fact that, though the spasticity of the left leg and arm disappeared rapidly after the first operation, the right leg remained just as rigid as it had been on admission, and the right arm showed only slight improvement. Four days after negative exploration of the left cortex the spastic condition of the right limbs had disappeared. The exploration could not account for this change. A possible explanation may be that on the day before the first operation the lateral ventricle was tapped through the left angle of the great fontanelle. It is conceivable that some slight edema or hemorrhage from this puncture may have temporarily involved the motor cortex for the right arm and leg. Had we been familiar with subdural puncture or inspection of the fontanelle after incision of the scalp, the possibility of a left cortical hemorrhage could have been ruled out. Inspection rather than puncture would seem to be the method of choice, for there must be a definite risk of damage to the motor cortex from a negative puncture.

The condition of the child at nine months was encouraging. Nothing abnormal could be found except a tendency to brachycephaly. Unfortunately, he was taken to Japan and will not come under observation again, so that the final physical and mental result will not be known.

SUMMARY

Rational treatment of intracranial hemorrhage of the newborn must be based on a correct diagnosis of the cause and site of the bleeding. In addition to the clinical symptoms, spinal puncture, inspection of the fontanelle after scalp incision or the less desirable subdural puncture through the fontanelle, ventricular puncture, and determination of the coagulability of the blood are valuable aids in diagnosis. Infratentorial bleeding is best treated by spinal puncture, for a hemorrhage of any size is rapidly fatal, and puncture appears to be sufficient in small hemorrhages. Supratentorial hemorrhage should be treated by osteoplastic resection of the parietal bone and evacuation of the clot. Aspiration or drainage of such hemorrhages does not insure against future trouble from adhesions and cyst formation, and should be used, if at all, only as a preliminary step to the Cushing operation. Spinal puncture and aspiration of the ventricle are indicated in the intraventricular hemorrhages. In all cases, but especially when hemorrhagic disease is diagnosed, subcutaneous, intramuscular or intravenous injection of whole blood, controlled by coagulability tests, should be given. The intracranial clot of the diathetic cases calls for the same surgical treatment as does the clot of traumatic origin. In the case reported a clot over a cerebral hemisphere was diagnosed and removed, but misleading clinical symptoms and failure to inspect or puncture the other side of the fontanelle led to a needless exploration of the opposite hemisphere. Except for brachycephaly, the child appeared normal at nine months. The only technical difficulty of the osteoplastic operation is closure of the dural flap. In our case this was demonstrated to be due to collapse of the skull,

and was easily remedied by lifting the head by the scalp edges, thus allowing the brain to drop back into place. A scalp tourniquet should not be used, for its pressure would increase cerebral herniation through the dural opening.

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(Stanford University Hospital)

OVARIAN AUTOTRANSPLANTATION *

By F. R. GIRARD, M. D., San Francisco.
Assistant Clinical Professor of Gynecology Stanford University Medical School, Attending Gynecologist San Francisco Hospital, Stanford Division

My experience in ovarian transplantation has been limited entirely to autotransplants and the results in ten cases will be given. The two circumstances under which these operations were performed were:

First: Three cases of hysterectomy with double salpingo-oöphorectomy and transplantation of parts of one or both ovaries into the abdominal wall. In all cases the grafts took and in all cases there has been periodic enlargement and varying degrees of tenderness in the grafts. All cases have had ablation symptoms since operation, but these symptoms have been markedly lessened during the period that the grafts showed activity. These findings are contrary to those of Tuffier, who states that while the grafts increase in size monthly for two or three years after hysterectomy, it is without any benefit to the patient.

Second: Six cases of double salpingo-oöphorectomy without hysterectomy and with autografts from either one or both ovaries into the abdominal wall, and one case of double salpingo-oöphorectomy without hysterectomy with autotransplants into wall of uterus. The justification for leaving the uterus and transplanting the ovaries is: the suppression of pain which follows retained ovaries with damaged blood supply and extensive denudation of the surface of the ovary, permitting adhesions and cystic degeneration and, most important of all, the preservation of menstruation, because that function is absolutely necessary along with ovulation to ensure the patient freedom from the distressing trophic, congestive and nervous symptoms which follow suppression of menstruation.

Surgical Technique: The technique of autografting is simple indeed and adds no extra risk to the operation. In all cases the ovaries were completely removed and the uterine end of the tube resected by a V-shaped incision into the cornua of the uterus. The ovaries were then wrapped in gauze and placed in a vessel containing normal salt solution at about 100° F. The operation and peritoneal toilet were then completed and in some cases a pocket was made, by blunt dissection, between the peritoneum and the under surface of the rectus muscle, on either one or both sides of the incision, according to the number of grafts to be used. The ovaries were then carefully inspected and areas of cystic degeneration were culled out. The remaining ovary, when possible, was cut into disks 2x2x½ cm. and from one to three of these disks were transplanted into the already prepared pockets. No sutures were used to hold the grafts in place. On removing the grafts from the saline solution, one is at first apt to be rather startled at the pale, lusterless and shriveled appearance of the grafts, but this apparently does not interfere in any way with the success of the grafts. The abdominal wall was closed in the usual manner.

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In other cases the grafts were inserted into a bed prepared on top of the anterior sheath of the rectus muscle, and in the subcutaneous fat, three or four cm. to either side of the incision.

I have never used grafts of the whole ovary and believe that better results will be obtained from multiple or seedling grafts, because a much larger surface is obtained which insures a better blood supply.

In one case the grafts were embedded into the cornua of the uterus after removal of the tubes. No matter where the grafts are embedded, the results seem equally good, provided the graft is asceptic, the field has an adequate blood supply, and the site chosen permits the graft to enlarge periodically without compression and consequent pain. I believe that the suggestion of Whitehouse, that the ovarian tissue be left in contact with the body fluids within the peritoneal cavity until required for grafting, to be a good one and in future I will place the grafts in the pouch of Douglas while completing the pelvic work and removing them just prior to closing the abdomen.

Average age was 30½ years, youngest 20 years and the oldest 41 years.

Summary of Cases: Immediate results of operation were uniformily good. Patients who had been grafted show no symptoms or complications different from other patients subject to pelvic operation.

Ultimate Results: As the time elapsed since the first operation is only 18 months, results for the first year and a half only can be given.

First—Cases with hysterectomy. All showed ablation symptoms varying from slight to moderately severe. All cases showed activity of grafts as indicated by periodic enlargement and tenderness of the grafts and amelioration of the ablation symptoms at this time. In none of the cases in which hysterectomy was done have the patients been entirely free from the symptoms of artificial menopause. Ablation symptoms appeared at the following times after operation: Three weeks, six weeks and four weeks, respectively.

The symptoms of menopause can be classified as slight in two cases and moderately severe in one case. In none of the cases are the symptoms constant and all show a tempering of these symptoms by the presence of the ovarian grafts.

Second—Cases without hysterectomy. 1. Time after operation of appearance of menstruation:

Case 1. Menstruation 4½ months, scanty at first, now moderate and regular, no pain.

Case 3. Menstruation 6 months, regular, 1½-day flow.

Case 4. Menstruation at 9 weeks after operation, scanty at first, now regular, 7 days, no dysmenorrhoea.

Case 5. Unable to trace patient.

Case 7. Menstruation at 5 weeks after operation, scanty at first, now heavy and regular, no dysmenorrhoea. On March 7, 1921, patient had her regular normal five-day flow. On March 23, 1921, she began to flow moderately again, but without pain. This continued for 10 days, when she was sent to San Francisco Hospital and curetted by Dr. Gibbons. Pelvic examination negative except for slightly enlarged uterus. Microscopic examination of curettings showed normal menstruating endometrium. Wassermann taken at time of first operation was doubtful, but is XXX at present, which probably accounts for the metrorrhagia.

Case 8. Menstruation at 3 months after operation, scanty, one day, no pain.

Case 10. Menstruation at 5 months. Scanty at first, now moderate flow, no pain.

2. Effect on ablation symptoms: Case 1. Severe until menstruation. Now only occasionally and very slight. Case 4. Slight flushing and nervousness until menstruation. Now only occasionally and slight. Thinks she is not more nervous than before operation. Case 7. No symptoms of artificial menopause. Case 8. Moderate flushing and nervousness until menstruation. Now only very slight symptoms, which are getting milder all the time. Case 10. Moderate symptoms for four months after operation. Now free for as long as two months at a time. Symptoms only occasional and slight.

CONCLUSIONS

1. Autografting of ovaries is a perfectly safe and rational procedure and is indicated, except in cases of malignancy or ovaries grossly infected in all patients requiring removal of the ovaries, with or without hysterectomy.

2. Ovaries requiring removal are: (a) Badly traumatized ovaries with much raw surface on capsule; (b) ovaries showing considerable cystic degeneration; (c) ovaries having a impaired blood supply.

3. Cystic degeneration of ovaries is no barrier to autotransplantation and ovaries removed in conditions of pyosalpinx can be transplanted, provided the ovaries themselves are not grossly infected.

4 Autotransplantations certainly lessens and delays ablation symptoms followig castration and in some cases affords complete freedom from symptoms of artificial menopause. Autotransplantation lets patient down easy.

5. That the autografts functionate is shown by periodic increase in size and tenderness of grafts with amelioration of ablation symptoms, and when the uterus remains, by menstruation.

6. When the ovaries are found suitable for transplantation, when possible the uterus should be allowed to remain, myomectomy done in fibroids, and as the body of the uterus adjacent to the tubes and the cervix are the two areas of persistent infection in inflammatory disease, the fundus should be resected and the cervix treated by deep cauterization or a Sturmdorf tracheloplasty, or amputated when this condition is present.

7. It is an established fact that a small portion of an ovary successfully engrafted anywhere furnishes to the subject of the graft the secretion or influence which preserves her sexuality, and prevents atrophy of the genital organs and other changes in the individual that are coincident with complete castration.

8. After ovarian transplantation certain cases show marked increase in sexual stimulation.

9. Reasonably healthy and undamaged ovaries should be left in situ with or without the uterus and autotransplantations should be used to carry on the physiological functions of the ovary only in those cases where, for reasons given above, both ovaries must be removed.

In studying the literature in regard to ovarian transplantations, one is impressed with the amount of experimental work which has been done along these lines, both in this country and in Europe. Although the findings of many of these investigators have been widely divergent, they all agree that the autotransplant is the method most promising of success, and that homografts and heterografts are successful in a much less degree. Also, the results after ovarian transplantation are de-

cidedly more brilliant in animal experimentation than when done in the human subject. Franklin Martin of Chicago in 1915 gave an excellent summary of the work done by various investigators in ovarian transplantation.

To quote the conclusions of various experimentors—Benthin thinks that the effects of ovarian transplantation are good, but that the experimental results are more successful than the therapeutic. Transplantations of small bits of ovary, while it gives good results, does not guarantee their permanency. Homotransplantation should be undertaken only in very young individuals, and in homotransplantations it is very important that the organs should be transplanted immediately after removal from the donor.

Stocker reports two cases in which he did an autotransplantation of part of an ovary. In one patient, age 28, a pan hysterectomy was done for a gonorrheal condition with extensive adhesions. One of the ovaries was cut out of the excised mass and sliced into disks only two or three mm. thick. An implanted disk of this kind grows into place very rapidly, as blood vessels soon grow through it. The bed into which it is implanted must be rich in blood vessels and must protect the graft from injury from without. Stocker implanted the graft in a fold of peritoneum and wound healed by primary union. An epinephrin test was made on the fifth day and there was no specific response as there is when the inhibiting influnce of the ovaries is entirely withdrawn. The patient never had any symptoms of artificial menopause and was restored to health after five years of semi-invalidism. Three years later an intestinal tumor necessitated a laparotomy. The disk of ovarian tissue was found to be about the size as when implanted and very vascular. In his second case the tube and ovary had been removed on one side for ruptured tubal pregnancy and two years later on the other side for the same condition. At the second operation a disk of ovary was transplanted into a fold in the peritoneum and menstruation continued regularly and patient's condition was excellent.

Norton agrees with Tuffier that cystic degeneration of the ovary is no bar to transplantation and he has grafted ovaries that were almost entirely cystic, cutting out the medium sized and larger cysts and implanting the residue. Some of these ovaries seemed hopelessly diseased and had been causing much pain over a long period of time. In these cases the patients were free from pain and menstruated regularly. He considers the operation one of the most satisfactory advances in modern surgery and recommends it in diseases of the ovaries. It should always be done instead of double oöphorectomy in idiots, defectives and criminals. Except for the fact that it does not allow pregnancy, it fulfills all the requirements of an ideal operation. It can be easily and quickly done. The functions of the ovary, both as to internal secretion and menstruation, are maintained and at the same time the ovary is placed in a clean, healthy bed completely protected from subsequent attacks of gonorrhoeal infection. With a new and diminished blood supply sclerosis and cystic degeneration are prevented or retarded. A small portion of the ovary retained within the abdomen seems to retain the power of the organ as a whole.

Lydston gives a summary of his previous work on sex gland implantation. He believes that the sex gland harmone is the most powerful cell stimulant, nutrient, and regenerator known to medical science and that sex gland transplantation preserves harmone production for a long time. He believes that certain physiologic and therapeutic advantages are permanent. In his cases the implanted tissue has never disappeared in less than twelve to eighteen months. Microscopic sections of the implanted gland show regeneration of circulation and the interstitial connective tissue which probably produces the so-called internal secretion.

Blair Bell found that if ovaries be excised and transplanted into the muscle of the uterus or abdominal wall, atrophy of the genital ducts will not occur. He found that the follicles first become cystic and then degenerate; that is to say, they ripen; but if completely buried cannot expell the contents and therefore become cystic and retrogress. He also noted that in the rabbit, if only the central portion of the ovary, which contains no follicles, be implanted, the interstitial cells of which the graft is composed, can maintain the integrity of the uterus alone. It is possible that ovarian transplantation in general and of the interstitial cells in particular, are capable of keeping normal the uterus, mammæ and other endocrine organs and the general metabolism, in the female. He concludes that it is not the ovaries alone which influence the female characteristics and genital functions, except in regard to the production of ova. The ovaries are only a part of the system to which most, if not all, of the other endocritic organs belong and in which these other organs figure with as great importance as the ovaries themselves.

In twenty-three cases of hysterectomy with autotransplantation of ovaries into the abdominal wall, done by Graves, he found that the ablation symptoms were almost identical with those in completely constrated women. He has had better results in treating ablation symptoms with ovarian extract and his results were better with extract of the whole ovary than when corpus luteum was used alone. He thinks that there is certainly an ovarian secretaion that is not produced in the corpus luteum, for profound effects are produced by removal of the ovaries before puberty when there are no corpus lutea. He does not know whether this early secretion originates in the follicles or the highly differentiated connective tissue of the ovarian stroma. The cause of vaso-motor disturbances following removal of the ovaries, Graves thinks to be due to the influence of some other organ of internal secretion, which has been rendered abnormally active by the loss of the balancing power exerted by the ovarian secretion. It is conceivable that the thyroid is made overactive by the removal of the ovaries and that the ablation symptoms are manifestations of hyperthyroidism.

Tuffier affirms that symptoms of artificial meno-

pause are due almost exclusively to the suppression of the menstrual function. Modern research has demonstrated the close connection and reciprocal action of the various glands with an internal secretion and their reciprocal changes when one functionally drops out. Therefore, special efforts should be made to preserve the balance between the various ductless glands. He transplants the ovaries into the subperitoneal tissue no matter how sclerocystic the ovaries are, provided they are aseptic.

He found that from three to five months later the grafts showed phenomena of congestion and about one week later menstruation began. In the interval between menstruation the grafts were scarcely palpable. In a report of 19 of 44 cases all but one menstruated in from three to seven months. During the period of latency all had symptoms of menopause which cleared up with restoration of menstruation. In autografts when the uterus was removed there was monthly ovulation, but the symptoms of menopause persisted. He conserves the uterus wherever possible when autografting ovaries, or does a partial hysterectomy, leaving enough of the body of the uterus to carry on the menstrual function. He regards these conservative measures especially indicated in cases of excessive thyroid function or when the symptoms of menopause are liable to be unusually severe and protracted with hyperthyroidism. Tuffier, in a paper presented at the London meeting of the Clinical Congress of Surgeons of North America in 1915, again insists that the beneficial effects of ovarian transplantation are due to the resulting menstruation and that ovulation without menstruation (as when uterus is removed) is without value.

He states: "My purpose in addressing you on this subject is to lay before you my experience in grafting of ovaries in the hope that menstruation might be preserved after operations for salpingitis and fibroids of the uterus."

CASE REPORTS

(1) Mrs. G. Age 33. **Operation:** September 3, 1919. Dilatation and curetage, deep cauterization of cervix, bilateral salpingo-oöphorectomy. Autografts left ovary into pockets between peritoneum and under surface rectus muscle on either side of incision. **Pathology:** Intraligamentous cyst right ovary size of small orange. Left ovary size of walnut and cystic. Both tubes closed, adherent and hydrosalpinx present.

Examination: September 29, 1920. Grafts not palpable. Patient has noticed slight tenderness of wound before menstrual periods. Patient had quite severe ablation symptoms until menstruation appeared January 12, 1920, when she had a profuse flow for one day. Since that time she has had only occasional flushing and at times she is free for as long as one month. Flows regularly every month from two to three days and has no dysmenorrhoea. In May flowed only one day and about that time flushing and nervousness were more severe than at any time since operation. That was the only time since menstruation began that ablation symptoms have been at all severe or that menstruation was diminished.

Vaginal Examination: Uterus normal size and position, freely movable, no tenderness, no pelvic masses. Patient states that since her operation sexual desire has been considerably increased and has remained so for more than one year.

(2) Mrs. C. B. Age 27. **Operation:** October 19, 1919. Hysterectomy, supravaginal, bilateral salpingo-oöphorectomy, separation of extensive intestinal and omental adhesions. Autotransplantation of ovarian grafts. **Pathology:** Both tubes buried in adhesions from previous pelvic peritonitis. Right tube closed, thickened, convoluted and adherent to right ovary and posterior surface of broad ligament. Left tube adherent to sigmoid and posterior surface of uterus, omental adhesions to uterus and adnexa. Ovaries enlarged, cystic and chronically inflammed.

Bilateral transplantation of ovarian grafts in pocket made between posterior surface of rectus muscle and peritoneum. Wound healed, primary union.

April 2, 1920. Ovarian grafts definitely palpable. Patient has thin abdominal wall. Patient states grafts vary in size, at times become enlarged and tender, remaining so for several months. During this time she feels much more energetic and has only slight flushing and some nervousness. Two months previously grafts were hardly palpable and patient had quite severe flushing, was extremely nervous and easily tired.

September 28, 1920. Grafts about same size as when examined last. Patient states that grafts enlarge and become tender at irregular intervals, during which time she feels better and is much less nervous. She now looks forward to those intervals of remission from flushing and nervousness and can tell when they are coming by the condition of the grafts.

(3) Miss C. J. Age 35. **Operation:** December 17, 1919. Partial hysterectomy, leaving lower third body of uterus. Bilateral salpingo-oöphorectomy, ovarian transplants from left ovary in abdominal wall. **Pathology:** Multiple submucous and intramural fibroids of upper half of uterus. Small dermoid cyst right ovary. Cystic degeneration of left ovary. Three sections from left ovary transplanted into abdominal subcutaneous tissue. Two pieces on right, one of left side.

Examination: April 20, 1920. Grafts feel larger than at any time since operation, slightly tender. For last two months patient has had flushes and dizzy spells. Have been less since grafts have enlarged. Feels as though she were going to menstruate.

June 20, 1920. Menstruated for one day. Moderate flow, very few flushes for past two months. Feels fine. Much less nervous. Grafts enlarged in May and again one week before flow commenced.

July, 1920. No menstruation but felt as though she would. Feels fine.

September 18, 1920. Flowed 1½ days. No pain. No flushes or nervous symptoms.

(4) Mrs. N. B. Age 38. **Operation:** January 15, 1920. Excision cyst left Bartholin's gland. Double salpingo-oöphorectomy. Resection fundus uterus. Freeing of adhesions, appendectomy, autotransplant of ovary into abdominal wall. **Pathology:** Bilateral tubo-ovarian masses and fundus adherent to omentum and sigmoid. Ovaries enlarged, cystic degeneration marked. Tubes distended, fimbriated ends sealed, hydrosalpinx. Left tube and ovary densely adherent in cul-de-sac. Much raw surface on fundus due to adhesions. Resection below attachment of round ligament. Reimplantation of round ligament.

Autotransplant size end of index finger from right ovary. Transplant into pocket between peritoneum and under surface left rectus muscle.

January 28, 1920. Wound healed primary union. Examination October 12, 1920: First menstruation nine weeks after operation. Scanty flow, no pain. Three days' duration. About two weeks before menstruation began she had moderate hot flushes and some dizziness which disappeared at onset of period. Has had regular monthly periods since operation with the exception of the August period, which was missed entirely. During this

time the ablation symptoms were somewhat more severe than at any time since operation.

As a rule she menstruates seven days, scanty first two days, moderate the other five days. No pain. Abdominal wall slightly sensitive during menstruation. At present has only occasional flushing and very slight. Thinks that she is not more nervous than before operation.

Vaginal Examination: Shows small uterus, somewhat adherent, not painful. No masses or tenderness in right and left pelvic regions. Graft in abdominal wall not palpable. Patient also stated that while in hospital she was troubled with nightly amorous dreams and she is now more passionate than she has been for years.

(5) Mrs. D. C. Age 20. Admitted S. F. H. August 7, 1919. Diagnosis: Bilateral salpingitis, chronic. Cervicitis, chronic. Discharged improved. Re-admitted October 8, 1919. Diagnosis: Bilateral salpingitis, chronic. Urethitis, acute. Erosion of cevix. Re-admitted December 5, 1919. Diagnosis: Salpingo - oöphoritis bilateral, subacute. Endocervicitis. Erosion of cervix. **Operation:** January 20, 1920. Curetage, cauterization of cervix, double salpingo - oöphorectomy, appendectomy, ovarian transplant into left cornua of uterus. Transplant from left ovary, 2x1x½ cm. **Pathology:** Both tubes and ovaries surrounded by light adhesions and bound down to posterior surface of broad ligament and sigmoid. Both tubes thickened, friable and fimbriated ends sealed. Ovaries enlarged, moderately cystic, size of large walnuts and after being freed showed large areas of raw surface, and it was considered advisable to remove them to prevent adhesions and further cystic degeneration. Uterus normal size and position, body firm, very few raw areas, which were closed. Decided to leave uterus and section of left ovary 2 cm. by 1 cm. transplanted in left cornua of uterus.

Unable to trace patient, so cannot give results.

(6) Mrs. G. L. Age 20. **Operation:** March 20, 1920. Deep cauterization of cervix. Double salpingo-oöphorectomy. Supra-vaginal hysterectomy. Freeing of adhesions, autotransplants. **Pathology:** Dense adhesions of omentum and sigmoid to double tubo-ovarian masses and fundus and posterior surface of uterus. Both tubes and ovaries adherent to posterior surface of uterus. Double pyosalpinx. Ovaries size of large walnuts, cystic and seat of inflammatory disease. Uterus larger and softer than normal. Uterus too badly involved by adhesions and metritis to leave. One section 2x1 cm. taken from each ovary and transplanted into subcutaneous fat on either side of incision.

April 1, 1920. Wound healed, primary union.

June 15. Severe flushes since three weeks after operation. Says she is more nervous. Grafts palpable but smaller than at operation.

August 10, 1920. Grafts larger than previously, moderately tender, began enlarging about one week ago. No flushes or nervousness for past ten days. Feels fine.

October 2, 1920. Grafts seem to enlarge and become tender about once a month. During this time the patient feels much better than during the intervals when grafts are small. Has much less flushing and nervousness but is never entirely quite free from these symptoms.

(7) Mrs. E. S. Age 30. **Operation:** June 17, 1920. Curetage, anterior colporrhaphy, perineorrhaphy, double salpingo-oöphorectomy, appendectomy, freeing of adhesions. Autotransplantations both ovaries into abdominal wall. **Pathology:** Both ovaries and tubes adherent in cul-de-sac by firm adhesions. Lumen of tubes closed. Both ovaries equally cystic. Corpus luteum cysts. Appendix adherent to right tubo-ovarian mass. Uterus normal size and position, not adherent. Apparently healthy and not removed. Autotransplants from both ovaries 2x2x1 cm. One transplant on either side of abdominal wound in subcutaneous tissue.

June 20, 1920. Slight separation at upper end and middle section of wound. No serum or purulent discharge. Closed with adhesive plaster.

July 6, 1920. Wound closed. Grafts palpable. No tenderness.

October 1, 1920. No flushing, palpitation or nervous phenomena since operation. First menstruation July 26, scanty, lasted for four days, used one pad a day. Grafts not tender. Second menstruation, August 18, menstruated for five days, good flow. Stopped for one day, then menstruated slightly for two days, soreness in either side of wound.

September 19, 1920. Flowed five days, heavy flow, no discomfort. Noticed a peculiar feeling in region of grafts for three days after menstruation had stopped. Patient states that periods are now more regular and that she had less discomfort than at any time since she can remember. Previously periods were very irregular, amenorrhea varying from three to nine months. Patient volunteered that she had feared loss of sexual desire after the operation, but such has not been the case. Is now the same weight as when in the best of health.

Pelvic Examination: Uterus normal size and position, not tender, movable. Pelvis free, no tenderness. Grafts palpable, not tender.

(8) Mrs. J. T. Age 41. **Operation:** July 22, 1920. Dilatation, curetage, double salpingo-oöphorectomy, appendectomy. **Pathology:** Both tubes enlarged, ends sealed, tubes distended with clear fluid. Left ovary size plum, marked cystic degeneration, densely adherent to posterior surface left broad ligament and pelvic wall. Right ovary adherent, normal size, cystic degeneration moderate. Uterus normal size and position, very few adhesions to uterus, hence not removed. Appendix retrocecal, adherent, removed.

Right ovary placed in normal saline solution, temperature 100°. Three sections of right ovary 2x½ cm. placed in pockets made in subcutaneous tissue 3 cm. to right and left of incision. Two transplants made on left side, one on right side.

August 2, 1920. Wound healed, primary union. Grafts palpable, not tender.

August 28, 1920. Grafts larger than previously, slightly tender. Has had few slight flushes, slightly more nervous. Is regular time for menstruation. Thinks that there is slight thin white discharge from vagina.

September 6, 1920. Grafts smaller than last week, not tender. Less nervous, no flushes. Feels fine, gained seven pounds in weight.

October 7, 1920. Grafts somewhat enlarged and sensitive about the end of the month. Patient notices a periodicity in the change in the grafts. States that they enlarged once a month and about the time that she used to menstruate before the operation. Four days after grafts enlarged this last time she had a slight flow for one day only. No pain or pelvic discomfort. One month previous to this time she felt as though she was going to menstruate but had only a thin, white vaginal discharge. States that the "hot spells," nervousness and slight dizziness that she noticed after the operation are much less.

(9) Mrs. C. B. L. Age 34. **Operation:** August 3, 1920. Dilatation and curetage. Supravaginal hysterectomy, bilateral salpingo-oöphorectomy, appendectomy. **Pathology:** Uterus retroverted and bound down to rectum by dense adhesions to tubes and ovaries bound down by adhesions to cul-de-sac. Uterus larger and softer than normal. Bilateral pyosalpinx and cystic degeneration of ovaries. Ovaries badly lacerated during removal. Autotransplants of piece of each ovary 2x2x1 cm. into subcutaneous fat.

Convalescence normal. Wound healed, primary union.

October 9, 1920. Grafts palpable, not tender. Three weeks after operation had flushes of heat, not severe. Patient somewhat more nervous since operation. Has noticed no change in size of grafts. Flushes remain about same and do not inconvenience patient. Has been working hard and thinks some of nervousness due to that.

(10) Mrs. C. B. Age 27. **Operation:** August 18, 1920. Curetage, cauterization of cervix double salpingo-oophorectomy. Denudation of sigmoid repaired by omental grafts. Appendectomy. Subcutaneous ovarian transplants, two in left and one in right side of incision. **Pathology:** Sigmoid adherent to left tubo-ovarian mass size of an apple, peritoneal coat of sigmoid torn in several places during separation. Left tubo-ovarian abscess. Right pyosalpinx, right ovary adherent to tube and pelvic wall and appendix. Ovary badly traumatized and surface denuded. Fundus of uterus resected down to attachment of round ligaments. Right ovary removed because of damage to blood supply and extensive denudation of surface. Such an ovary would have become painful, adherent and cystic. Three grafts 2x2x1 cm. transplanted into subcutaneous tissue.

October 12, 1920. Moderate ablation symptoms began five weeks after operation. No menstruation to date. Grafts palpable, no change in size, not tender.

March 26, 1921. Wound became sensitive in region of grafts about end of December. Again became sensitive in second week of January and five days later had slight flow for one day. Since January flows regularly for three days, moderate amount and has no pain. Moderate flushing was present for four months after operation. Now free for as long as two months at a time and is only occasional and slight.

Pelvic Examination: Uterus normal size, slightly pulled to left, not tender. Pelvis is negative, no palpable enlargement of grafts, but slight tenderness of wound.

OVARIAN AUTOTRANSPLANTATION WITHOUT HYSTERECTOMY

No.	First Menstruation Post Operation	Ablation Symptoms	Condition of Grafts
1.	4½ months after operation. Now regular. No pain.	Severe up to menstruation. Now decreased and mild.	Grafts not palpable, but slight tenderness of wound before and during menstruation. Uterus normal size and position, freely movable, no tenderness or pelvic masses. Increased sexual desire.
3.	6 months after operation. Now regular, no pain. 1½ days.	Moderate flushes for first 7 months. Now entirely free.	Grafts palpable. Slightly tender. Enlarge one week before menstruation.
4.	9 weeks. Scanty at first. Now regular. 7 days. No pain.	Moderate flushes and nervousness for 3 months. Now only occasional and slight.	Uterus small, somewhat adherent. No pelvic masses or tenderness. Sexually stronger than for years.
5.	Unable to trace patient.		
7.	5 weeks, scanty at first. Now regular, 5 days' heavy flow, no pain.	No ablation symptoms since operation.	Grafts not palpable. Has peculiar feeling in region of grafts during menstruation. Uterus normal size and position, movable, no masses or tenderness.
8.	3 months scanty, 1 day. No pain.	Moderate symptoms after operation. Less now.	Monthly enlargement and tenderness of grafts.
10.	5 months, scanty at first. Now 3 days, moderate flow. No Pain.	Moderate symptoms for 4 months after operation. Now free for as long as 2 months at a time. Symptoms only occasional and slight.	Uterus normal size, slightly pulled to left. Not tender, pelvis negative. No palpable enlargement, but slight tenderness of wound.

OVARIAN AUTOTRANSPLANTATION WITH HYSTERECTOMY

No.	Ablation Symptoms	Enlargement and Tenderness of Grafts
2.	Began 6 weeks after operation. When grafts are small she has severe flushing and nervousness. When grafts are enlarged she has slight symptoms and is much more energetic and feels fine.	Grafts palpable. Enlarge at irregular intervals. Grafts slightly tender.
6.	Moderate flushing and nervousness began 3 weeks after operation. Ablation symptoms very much tempered by enlargement of grafts, but never entirely free.	Enlargement and tenderness of grafts monthly.
9.	Flushing began between 3 and 4 weeks after operation. Now only slight and do not inconvenience patient.	Grafts palpable, but do not change in size.

(120 Flood Building)

CHRONIC TUBERCULOSIS IN EARLY INFANCY*

By RACHEL L. ASH, M. D., San Francisco, Cal.

Tuberculosis occurs at all ages and under all social conditions. Its unsuspected frequency in adult life became known with the publication of the post-mortem statistics of Naegeli[1] in 1900 and Burkhardt[2] in 1906. More recently the tuberculin reaction, the X-ray and careful clinical study have made available the statistics of childhood and more especially those of infancy. Tuberculosis of infancy generally runs a rapid course to a fatal termination and the younger the infant the shorter the duration of the disease.

Sometime ago a tuberculous infant came under observation at the University of California Hospital whose disease ran so chronic a course that the correct diagnosis was not made until a few months before death. As this case presents valuable material for study it will first be reported briefly and then its most important aspects will be discussed in relation to the tuberculosis of early infancy.

C. N. (U. C. H. No. 17062) aet 6 months, was brought to the hospital April 9, 1918, for difficulty in breathing. Here she remained until her death, November 16, 1919, at the age of two years and one month. The mother, who died of pulmonary tuberculosis when the infant was four months old, had nursed her for the first six weeks of her life; then the child was removed from the home environment. At six months her gain over her birth weight was four pounds only. A questionable history of syphilis was obtained from the father, who, on examination, however, showed no signs nor stigmata of lues; his Wassermann was negative.

The most distressing feature of this pale, poorly nourished, irritable little baby was dyspnoea; the expiration was accompanied by a sharp, apparently painful, little cry or cough. The markedly emphysematous chest displayed an unusual prominence of the upper sternum. Movement was slight at the bases, especially at the right. The skin was mottled with a fine papular rash over the scalp, neck and back. A general glandular adenopathy was present, the glands being aggregated into small masses in the cervical and inguinal regions. Percussion of the chest elicited sub-manubrial dullness, interscapular dullness, and slight dullness over the lower right lung posteriorly. Large snoring and small bubbling and crepitant rales were heard generally over the pulmonary area. D'Espine was positive to D₆. The heart and the abdomen showed nothing unusual. The temperature ranged from 36.5° to 39°, the respirations occasionally reached 55°. The skin and intra-dermal tuberculin tests and the Wassermann reactions were negative. Repeated blood counts and examinations of the urine developed nothing of importance. The diagnosis of enlarged thymus, enlarged root glands and tuberculosis of the lungs was borne out by the X-ray findings. The respiratory difficulty was thought at this time to be due to hypertrophy of the thymus. No definite opinion was given as to the character of the rash.

For some months the child's general condition remained the same apparently; the pulmonary process developed very slowly but gradually reached the other lung. Transitory attacks of pneumonia seemed not to hasten the course of the disease. When the child had been in the hospital six months a painful swelling appeared about the left elbow joint. From this time on the involvement of the osseous system became the dominant feature. There followed in succession the disease of the right radius, the right, the left tibia, metatarsals, some of the metacarpals, both ankle joints, an otitis media, the nasal bones and finally the right mastoid.

The radiological diagnosis was persistently syphilis of each long bone as it was submitted, while the diagnosis of the lung plates oscillated between syphilis and tuberculosis. The Wassermann and tuberculin tests remained negative, and anti-luetic treatment was without result.

Eventually one of the ankle joints became fluctuant; it was curetted and the pathologic and the bacteriologic reports were tuberculosis. The Von Pirquet became positive when the child was two years old, and about the time that it became necessary to operate for a staphylococcus aureus mastoid infection, secondary to the long-standing otitis media. A low-grade staphylococcus septicemia followed and the patient died suddenly one month after the operation.

AUTOPSY DIAGNOSIS (DR. G. Y. RUSK)

Chronic pulmonary tuberculosis with cavity formation in left upper and right middle and lower lobes, with a diffuse distribution of conglomerate tubercles throughout the remainder of the lung. Bilateral chronic adhesive pleurisy. Bilateral cervical adenitis. Acute and chronic tuberculous ulcers of ileum. Caseous mediastinal and mesenteric lymph nodes. Isolated conglomerate tubercle of the left kidney. Tuberculous osteomyelitis of right tibia and fibula. Tuberculosis of the tarsal bones of right foot with sinus formation. Tuberculous necrosis of lower end of humerus and upper end of radius and ulna with involvement of the joint. Marked emaciation.

A more detailed description of the lungs and bones follows.

Left Lung—The pleural surface is covered with fibrinous adhesive tags. On palpation the upper lobe feels perfectly solid and nodular solid areas can be felt in the lower lobe. On section there are found several cavities in the upper lobe. The largest one measures 2 cm. in diameter. These cavities are surrounded by *thick indurated white walls*. The lower lobe contains mutiple conglomerate tubercles, some of which are caseous. The intervening lung tissue shows marked hypostatic congestion. Some areas are very suggestive of broncho-pneumonia.

Right Lung—The pleural surface is covered with fibrous tags of adhesions. Solid and nodular masses can be palpated in the upper lobe. On section the upper lobe shows several conglomerate tubercles; the intervening lung tissue is rather

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emphysematous. The middle lobe contains a cavity 1.5 cm. in diameter, the wall of this cavity is ragged and is surrounded by a *wide zone of fibrosis*. The lower lobe contains several cavities, the largest one measures 2 cm. in diameter. These cavities with *their nodular fibrous walls* occupy practically the entire lower lobe.

Upper Extremities—The left elbow is fixed in a position of semi-flexion exposing the joint. The lower end of the humerus is necrotic and caseous; the upper end of the radius and ulna also shows necrosis of the bone. The joint is involved with fibrous ankylosis and tuberculous granulation tissue covers the articular surface. The soft tissues around the joints are indurated and edematous. There is no sinus formation.

Lower Extremities—The entire tibia and fibula of the right side were removed. The periosteal surface of the tibia is slightly roughened. On section the marrow of the tibia is firm and caseous in appearance. The lower end of the marrow canal in this region is surrounded by a very thin shell of bone. The bony shaft is rather thin throughout the extent of the tibia but there are no points of necrosis.

The fibula is somewhat distorted in shape and surface is irregular. The marrow at a point about the center of the bone appears caseous. Over the dorsum of the foot 4 cm. below ankle joint there is an opening surrounded by indurated granulation tissue.

On exposing the tarsal bones they appear soft and osteoporotic but no definite necrosis can be made out.

The brain was removed. There was a moderate increase in the amount of cerebrospinal fluid. The brain was apparently normal.

SOURCE OF INFECTION

Tuberculosis of the earliest weeks of life is either congenital or acquired. By congenital tuberculosis is meant a direct transference of tubercle bacilli from the mother to the child in utero, either by the circulating blood—the placental route, or by the aspiration or deglutition of tuberculous amniotic fluid. Von Reuss[3] collected 26 indisputable cases of congenital tuberculosis from the literature; the children were either born prematurely or lived a few weeks, and the primary foci of infection were found in the lymph nodes about the portal vein, the liver and spleen. Acquired tuberculosis is a post-natal invasion through the usual external portals of entry; the duration of life is usually longer. The case above was undoubtedly acquired tuberculosis, as shown by early signs within the chest, the chronicity of the infection and the history of direct contact with maternal pulmonary tuberculosis.

THE COURSE OF THE INFECTION

If we accept the pathological and clinical evidence that the lungs presented the oldest lesions, the course of the infection can be satisfactorily followed. Very early in life, tuberculous material, aspirated by the infant, lodged in some alveolus—the primary lung focus (Ghon's[4] primäre Lungenherd). There may have been several such early foci during the six weeks of maternal contact. Soon the regional and later the peri-bronchial and peri-tracheal glands became involved. When the child came under observation, the glandular hyperplasia had already become massive in a valiant but futile attempt to localize the process. Many areas of consolidation were already present, especially in the right lung, the sequel of a ruptured caseous gland or of a new infection from an extraneous source. The disease of the bones was of a much later date, due probably to haematogenous invasion from distant foci. Still later gastro-intestinal lesions appeared. The pulmonary disease can not be classified with the usual tuberculosis of these organs in infancy. The postmortem report reads: "The wall of the cavity is surrounded by a wide wall of fibrosis. These cavities are surrounded by thick indurated white walls." Pulmonary tuberculosis at this period of life runs its course quickly. In all of Ghon's 27 cases with cavity formation in the first two years of life, an early dissemination of miliary tubercles occurred. Delicate attempts at healing were observed in only three cases. Geipel[5] thus describes the cavities of early infancy: "An encapsulating tissue reaction does not develop in the periphery, at least not noticeably. A caseous pneumonic zone surrounds the cavities which later may coalesce." It would seem that this child had been so vaccinated "by a first infection by way of the lungs" (Opie[6]) or had become so allergic (Von Pirquet[7]) that a second infection assumed a chronic character.

CLINICAL OBSERVATIONS

Only the clinically important features will here be discussed. The expiratory dyspnœa and stridor and the accompanying cough were so remarkably pathognomonic that had it not been for the enlarged thymus an immediate diagnosis of compression due to tuberculous peri-tracheal and peri-bronchial glands would have been made. This respiratory difficulty disappeared toward the end of the first year. The skin condition was probably tuberculosis, but was not so diagnosed. It is said that only 17 per cent of all tuberculides are diagnosed correctly. Figures show that they occur in about 20 per cent of all cases of infantile tuberculosis. The lungs were always suggestive of tuberculosis, although no cavities could be demonstrated and the constancy of the percultatory and auscultatory phenomena were puzzling. The greatest diversity of opinion ranged about the X-rays of the bones. From the radiographer's standpoint these were undoubtedly syphilis, as shown by location of the primary foci, the periosteal thickening, the bone proliferation accompanying bone destruction, and the absence of sinus formation. The presence of tuberculosis need not exclude lues; but here the postmortem reports did exclude it. Since this case was studied, three other cases of bone tuberculosis with a radiographic diagnosis of syphilis have come under observation, in somewhat older children, however. Two died of meningitis tuberculosa, and the third, a patient of Dr. Langley Porter, developed skin tuberculides confirmed by pathologic section.

The tuberculin reaction was also unusual. Why it appeared late or why it appeared at all it is impossible to say. According to Dunn and Cohen,[8]

who studied 374 cases with 138 necropsies, the positive Von Pirquet has a great diagnostic value, "but the presence of a negative Von Pirquet in no way rules out the diagnosis in a child under two years of age."

DURATION AND PROGNOSIS

The duration of tuberculosis acquired during the first year of life is very short, but few infants reach the fifteenth month. Dunn [8] and Fischberg,[9] however, believe that if the condition remains primary—that is, with the Von Pirquet, the sign of D'Espine and the roentgenogram—any one or all of these as the only signs of tuberculosis—calcification and cicatrization may occur. As evidence they have autopsies of infants who have died of intercurrent diseases. Schlossmann [10] holds that in tubreculoscis of infancy there is no trend toward calcification. "Indeed there is not a positive instance where a tendency toward limitation of the disease was observed." Geipel [5] believes that the mortality is 100 per cent. It would seem then, that the duration of the disease depends on the infant's native defense, the number of primary foci, and the virulence of the infecting organism. And as, in the first months of life there is rarely any attempt toward the latent inactive state of later life, the prognosis is bad.

The above case is reported because in the opinion of the many clinicians who observed its progress, it was an unusual example of the adult type of tuberculosis occurring in infancy.

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NOTICES

The University of California Medical School has received notification that Dr. C. v. Pirquet has been obliged to forego his western trip and that his lecture engagements are therefore cancelled.

Important—

CONVENTION PROGRAM will be closed and go to press the first week in February.

NEPHRECTOMY IN HUNCHBACKS—WITH REPORT OF TWO CASES

By CHAS. D. LOCKWOOD, M. D., Pasadena

Surgeons who have preformed nephrectomy on the hunchbacked will, I am sure, testify to the extreme difficulty attending this operation in patients suffering with this deformity. It has been my duty to operate two such cases and the difficulties encountered in technique, as well as the unusually interesting features characterizing both cases, seemed sufficient justification for this paper.

Not only is the ordinary technique of lumbar nephrectomy quite impossible in these cases, but there are grave difficulties accompanying the abdominal route. In persons suffering with kyphosis the lower ribs overlap the crest of the ileum and the intercostal spaces are so narrowed that no room is left for adequate exposure of the kidney. The abdominal route, which presents the only feasible approach, is also greatly complicated by the deformity. The antero posterior diameter of the abdominal cavity is greatly deepened and there is a corresponding shortening of the longitudinal diameter. The kidney is carried well up into the concavity opposite the kyphosis and this renders it quite inaccessible.

The great shortening of the longitudinal diameter of the abdominal wall renders the ordinary rectus incision inadequate. If the incision is carried farther out, the overhanging ribs and the crest of the ileum so encroach upon the available space as to render such an incision useless. These difficulties are best met by a combined outer rectus incision and a transverse incision following the lower border of the ribs as far out as possible. The overhanging ribs are then lifted upward by broad powerful retractors. The retroperitoneum is now slit, the ureter ligated and the kidney dislocated toward the medium line. The renal vessels are next clamped and divided. Especial difficulty is encountered in ligating the vessels, inasmuch as this step in the operation, as well as the others, is done almost entirely by touch. If drainage is indicated it is best secured by means of a stab wound retroperitoneally between the ribs.

CASE REPORTS

Case I.—C. A. St. A. Age 52. Occupation, barber. Family history, good; both parents lived to be over seventy-five years of age. Habits good. No venereal infection. At age of thirty developed Pot's disease of the spine. He was treated by Dr. Gillette of St. Paul, and his spine lesion healed, leaving a marked kyphosis.

His chief complaint was frequent and painful urination. Once or twice he had noticed a little blood in his urine. He was conscious of his left side, especially if he caught cold. It was heavy and painful at times.

Examination: Anemic-looking, hunchbacked. Chest negative except for deformity. Abdomen negative. Per rectum, hard slightly movable insensitive prostate. Number fifteen Franch catheter passed without difficulty. Two ounces of cloudy urine withdrawn. Circulation fair. Blood pressure, 140. Cystoscopic examination: Two attempts were made to catheterize the ureters, but owing to great deformity and sensitiveness of the bladder, they were unsuccessful. A good view, however, was obtained of both ureteral orifices. The left orifice was oedematous and ulcerated; the right, normal except for slight relaxation and pouting. Left nephrectomy was determined upon. The

urine contained many tubercule bacilli. Operation: A left rectus incision was made, and this was joined by a transverse one along the lower border of the ribs. The kidney was small, densely adherent to its capsule and very inaccessible. Considerable difficulty was encountered in securing the pedicle, and bleeding was quite free. The patient left the table in good condition.

Post-operative course: Acute nephritis developed on the third or fourth day, with high temperature. The patient eliminated fifteen to thirty ounces of urine daily. The blood showed nitrogen retention. He was placed on a carefully measured diet, consisting entirely of carbohydrates. He gradually improved, wound healed and did not subsequently break down, although there was wound infection. Two months after operation, the patient suddenly died one night. No autopsy was allowed. The kidney when removed showed little gross trouble, but there were one or two suspicious areas. A glass slide drawn over these areas and stained, showed tubercle bacilli in abundance.

Case II.—Mr. G. P. Age 79. Retired manufacturer. First seen November 21, 1919. Family history negative. Habits good. Venereal history negative.

Present complaint: One month prior to my examination he had an attack of hematuria. This recurred and he was passing blood freely from the urethra. At times it was bright red, and at times mixed with urine. He arose several times at night to urinate. He suffered no pain. He was very nervous and much afraid of surgery.

Physical examination: Vigorous-looking old man of Danish descent. Chest, barrel-shaped as a result of marked kyphosis. This was congenital in origin, and not tubercular. Abdomen, retracted and shortened, with eleventh and twelfth ribs overlapping the ilium. Per rectum, large, soft, movable prostate.

Cystoscopic examination: November 24, 1919, patient was so frightened and nervous that a satisfactory examination was impossible. There was free hemorrhage, which seemed to come from an intravesical lobe of the prostate. The ureters could not be found, owing to their situation behind the greatly enlarged lateral lobes and the bloody field. There were two ounces of residual urine. The hemorrhage was thought to come from the prostate gland, and prostatectomy was advised. The bleeding stopped after a few days' bladder drainage with an inlying catheter. Patient refused operation, and returned home.

Hemorrhage soon recurred and two months later, January 23, 1920, a supra-public prostatectomy was performed. A moderately large prostate with large intravesical lobes was removed. The bladder seemed normal to palpation and inspection. Patient stood operation well, but suffered considerable post-operative shock, owing to his anemic condition. There was no hemorrhage following operation until the end of the sixth week. When the wound was closed and patient was about to leave the hospital, he began to pass bloody urine similar to that passed before his prostate was removed.

Cystoscopic examination revealed a villous growth near the right meatus, which was thought to be the source of hemorrhage and which had been overlooked at operation. The supra-pubic wound was reopened and villous tumor cauterized. All bleeding stopped. Wound healed, and patient again passed his urine normally and returned home. Within a few weeks, bleeding recurred and continued at intervals for six months. After three unsuccessful attempts by Dr. Ferrier, my associate, and myself to catheterize the ureters, Dr. Ferrier succeeded in securing a good view of both ureters. Clots of blood were protruding from the left ureter, the right spurted clear urine. Pthalein appeared on the right side in three minutes, and the thirty-minute percentage was 18 per cent. Four per cent dye was excreted from the left side.

Left pyelogram (described by Dr. Ferrier): 10 cc. of 20 per cent sodium bromide injected without spasm. Normal kidney position. Pelvis moderately enlarged with a smooth outline. Projecting into the pelvis from the renal parenchyma is a round, smooth filling defect, 2.5 in diameter. No distortion or retraction of the calyces.

A diagnosis of tumor projecting into the kidney pelvis was made, probably a papiloma. Filling defect due to blood clot was excluded because of the low comparative function, the fact that the shadow was continuous with the renal papillae and was not observed at the pelvic outlet, while the pelvis was definitely enlarged.

The patient had become almost exsanguinated and his hemoglobin ran down to 30 per cent. He was transfused six or seven times at short intervals with great improvement.

Finally on June 12, 1920, his left kidney was removed through a left rectus incision, by the technique described above. While closing the wound, he was again transfused. He made a prompt and complete recovery and is now in good health.

The tumor proved to be an adeno-carcinoma of the cortex of the kidney and a papilloma of the upper calyx which projected into the kidney pelvis.

ETIOLOGY OF GOUT

By W. F. McNUTT, SR., M. D., San Francisco

The etiology of few diseases has been more discussed than has gout. Very few writers have frankly admitted the fact that the cause is unknown. Sydenham said, "No very limited theory and no one particular hypothesis can be found applicable to explain the whole nature of gout." Trousseau wisely did not attempt, as most writers did and do, to define and explain the cause of gout. He said, "It is dominated by a specific cause, which we know only by its effects and which we term the gouty diathesis." Osler states that "Alcohol is the most potent factor in the disease (gout). There is probably defective oxivation of the foodstuff, combined with imperfect elimination of the waste products of the body." But frankly states, "The nature of gout is unknown."

Most writers who proceed to explain their particular theory of gout would, no doubt, subscribe to Shakespeare's wisdom when he makes Hamlet say, "There are more things in heaven and earth, Horatio, than are dreamt of in your philosophy." Only a few years ago, it might be called medical heresy to doubt that uric acid in the blood was not the cause of gout. I can well remember when Chalmers Watson apologetically hinted that uric acid might not be the sole cause of gout. He said, "It would, I think, be well if much less attention were centered on the excretion of uric acid alone, as the all-important factor of the disease"—gout. Uric acid in the blood has been abandoned as the cause of gout. It would, no doubt, be called medical heresy at present to doubt that a local foci of infection is the cause of gout. The foci of infection may be at the

Note—Members of the medical profession undoubtedly will derive inspiration from this article by a member of our profession who has been in active practice for sixty years, and who is still actively interested in the welfare of the sick.—Editor.

root of a tooth, or in the tonsils, or any other place.

We do know that we have hereditary and so-called acquired gout. Acquired gout is the development of gout, by food, habits, etc., only when there is a gouty diathesis. We know that age, occupation, clothing, diet habits, etc., are potent factors that make for gout. Those of us who have practiced medicine for many years, know that many persons overeat, drink freely, live an irregular and dissolute life, often not a sound tooth in their mouth, and no gout because there was no gouty diathesis. My own experience and belief is, that it is not red or dark meat, or duck or turkey protein food, or strawberries, etc., or the quality, but the quantity of food, drink, etc., that makes for gout. Those who eat and drink sparingly, live a careful, well regulated life, may often avoid hereditary gout and will surely avoid acquired gout.

When the etiology of a disease is unknown, it behooves the physician to be wary in prescribing or proscribing certain articles of food. He must be guided by clinical experience. And here, again, the physician should be particularly on his guard who depends upon clinical experience. The influence of the mind on the body, especially the sick body, is such that the physician is often honestly deceived in ascribable cures to his remedies, and draws erroneous conclusions as to the cause of the disease. For instance, before we knew anything of the etiology of phthisis, how many theories of its etiology and cures were advocated and believed. It would be appalling, if we could only know the number of stomachs that have been injured by bicarbonate of soda and the prolonged use of alkaline mineral water to neutralize the uric acid in the blood of gouty people. Some physicians learn by years of experience that to be conservatively progressive is wisdom.

An old Scotch physician listened very attentively to a young physician's enthusiastic account of a discovery of a new remedy with which he had cured three patients, thought to be incurable. The young physician was very anxious for his senior to adopt the new remedy. The old physician said, "I'll jest bide-a-wee tie you cure more patients." The etiology of gout will be discovered some time. It may be that the time will come when gout will only remain as a memory—as a disease that was and is not. Who knows?

Gout would seem to be a disease of many relations, judging from the term in use. We speak of rheumatic gout, gouty arthritis, gouty phlebitis, gouty critis, gouty nephritis, gouty bronchitis, gouty asthma, etc. May I not say, while the etiology of gout is unknown, it behooves us to rely on empirical remedies, established by clinical experience, combined with the treatment of the patient. Is there any relation of gout to pernicious anemia? Has every case of pernicious anemia a gouty diathesis?

GENERAL SESSION AND SECTION OFFICERS FOR THE 1922 MEETING OF THE STATE SOCIETY

The list of the officers of the general sessions and the various sections of the State Society is published below, so that members desiring to contribute papers may have the names and addresses of the proper officers of the section in which they are interested. Members desiring to present papers should communicate without delay with the chairman and secretary of the appropriate section, because the program is getting well under way and will be closed and go to press the first week in February.

The Secretary of the State Society, as chairman of the General Program Committee, invites correspondence and suggestions regarding any phase of the 1922 program.

GENERAL SESSIONS

Chairman, Dr. John H. Graves, President of the Society, 977 Valencia Street, San Francisco.
Secretary, Dr. W. E. Musgrave, Chairman of the Program Committee, 912 Butler Building, San Francisco.

SECTION ON TECHNICAL SPECIALTIES

Chairman, Dr. Ray Lyman Wilbur, President Stanford University.
Secretary, Dr. Charles T. Sturgeon, Merritt Building, Los Angeles.

SECTION ON MEDICAL ECONOMICS, EDUCATION AND PUBLIC HEALTH
(League for the Conservation of Public Health)

Chairman, Dr. Dudley Smith (President League for the Conservation of Public Health), Thomson Building, Oakland.
Secretary, Dr. W. T. McArthur (Secretary League for the Conservation of Public Health), Security Building, Los Angeles.

SECTION ON INDUSTRIAL MEDICINE AND SURGERY

Chairman, Dr. E. W. Cleary, 177 Post Street, San Francisco.
Secretary, Dr. Packard Thurber, 906 Black Building, Los Angeles.

SECTION ON RADIOLOGY
(Roentgenology and Radium Therapy)

Chairman, Dr. Albert Soiland, 527 West Seventh Street, Los Angeles.
Secretary, Dr. H. E. Ruggles, Butler Building, San Francisco.

SECTION ON PATHOLOGY AND BACTERIOLOGY

Chairman, Dr. William Ophuls, Stanford University Medical School, San Francisco.
Secretary, Dr. Roy W. Hammack, Brockman Building, Los Angeles.

SECTION ON GENERAL MEDICINE

Chairman, Dr. Joseph M. King, Brockman Building, Los Angeles.
Secretary, Dr. E. S. Kilgore, 391 Sutter Street, San Francisco.

SECTION ON PEDIATRICS

Chairman, Dr. William Palmer Lucas, University Hospital, San Francisco.
Secretary, Dr. Hugh K. Berkley, Brockman Building, Los Angeles.

SECTION ON NEUROPSYCHIATRY

Chairman, Dr. Walter F. Schaller, 909 Hyde Street, San Francisco.
Secretary, Dr. W. B. Kern, Brockman Building, Los Angeles.

SECTION ON GENERAL SURGERY

Chairman, Dr. Charles D. Lockwood, 295 Markham Place, Pasadena.
Secretary, Dr. Edmund Butler, Butler Building, San Francisco.

SECTION ON EYE, EAR, NOSE AND THROAT

Chairman, Dr. Frank A. Burton, Watts Building, San Diego.
Secretary, Dr. Harvard McNaught, Butler Building, San Francisco.

SECTION ON UROLOGY

Chairman, Dr. George W. Hartman, 999 Sutter Street, San Francisco.
Secretary, Dr. Louis Clive Jacobs, 462 Flood Building, San Francisco.

SECTION ON ORTHOPEDIC SURGERY

Chairman, Dr. W. W. Richardson, Brockman Building, Los Angeles.
Secretary, Dr. G. J. McChesney, Flood Building, San Francisco.

SECTION ON ANESTHESIOLOGY

Chairman, Dr. Mary E. Botsford, 807 Francisco Street, San Francisco.
Secretary, Dr. Eleanor Seymour, 308 Consolidated Realty Building, Los Angeles.

SECTION ON GYNECOLOGY AND OBSTETRICS

Chairman, Dr. Harry M. Voorhees, Brockman Building, Los Angeles.
Secretary, Dr. L. A. Emge, Stanford University Hospital, San Francisco.

Pharmacy and Chemistry

Edited by FELIX LENGFELD, Ph. D.

Help the propaganda for reform by prescribing official preparations. The committees of the U. S. P. and N. F. are chosen from the very best therapeutists, pharmacologists, pharmacognosists and pharmacists. The formulae are carefully worked out and the products tested in scientifically equipped laboratories under the very best conditions. Is it not plausible to assume that these preparations are, at least, as good as those evolved with far inferior facilities by the mercenary nostrum maker who claims all the law will allow?

Patent Medicines in England.—We continually hear from hyphenated and semi-hyphenated Americans how much better things are done abroad than in this country. It is refreshing, therefore, to learn that some things are not so well done. England seems to be at least fifteen years behind us in the matter of regulating patent medicines. Apparently any nostrum may be foisted upon the unsuspecting public and any claim made, no matter how preposterous or dangerous.

Pil Mixed Treatment (Chichester), sold in the form of pills containing 1/20 grain mercuric iodid and 5 grains potassium iodid, has been extensively advertised as a standard routine treatment for syphilis, but has been refused admission to the N. N. R. because an examination made in 1907 showed that the claims were unwarranted, exaggerated and misleading.

"If heeded by those who read the advertising it will result in much harm to the public and the profession. For this reason the present report of the Council is published as a protest against any advertising propaganda advocating the routine treatment of a disease which requires that each case be studied carefully so that prompt and efficient measures may be applied to the various manifestations of the disease." (Jour. A. M. A., Oct. 22, 1921, p. 1355.)

The paragraph quoted should be put into permanent form and a copy sent to every physician, for it applies not alone to this preparation but to many others on the market. Every patient certainly has a right to ask that the physician consider his case by itself and prescribe for his case and his case alone, by using such remedies and such quantities as seem indicated and only using a proprietary preparation when it just happens to fit the individual case.

Endocrinology and Pseudo-Endocrinology.—R. G. Hoskins, Professor of Physiology, Ohio State University College of Medicine, pleads for a greater degree of discrimination on the part of physicians in evaluating not only proper data, but also the various agencies either seeking support in or exploiting this field. The latter aspect of the situation deserves special emphasis. Those who purpose acting as purveyors to the medical profession must accept the status of purveyors. The physicians or laboratory investigator of the medical sciences shall not exploit for commercial gain the result of his studies. At the present time a commercial campaign is being carried on by a "laboratory" purporting to specialize in endocrine products. The mail of physicians is flooded with a series of postcards, each card recommending and suggesting the use of the proprietary product of this self-styled laboratory for conditions ranging from eczema to epilepsy, and from obesity to tuberculosis. This free postcard advice is reinforced by reference to "monographs" and a trade journal in which scientific medicine is systematically belittled as unpractical. This advertising campaign is ostensibly under the supervision of the enterprising Mr. Hyde, the merchant of the firm. Mr. Hyde is a profound admirer of the eminent Dr. Jekyll, the medical director. (Jour. A. M. A., Nov. 5, 1921, p. 1499.)

STATE SOCIETY

Ladies who accompany their husbands to the convention of the Medical Society of the State of California in Yosemite National Park next May 15-18, will find many things of interest to occupy their time while the delegates are busy with the scientific program.

Yosemite Valley, where the convention will be held, is the center of life in Yosemite National Park, and the sunny verandas of Sentinel Hotel and Yosemite Lodge are ideal for rest and quiet recreation. Every evening there is an entertainment of high merit at Yosemite Lodge, followed by a dance.

Those who love horseback riding can obtain good horses for use on the beautiful trails of the valley. The finest trail is that which winds between the great boulders and trees of the east end of the valley, emerging at Mirror Lake. In the west end of the valley, the trail generally follows the tortuous course of the Merced River.

Guides can be obtained for numerous scenic one-day trips by horseback outside the valley. Most famous of all these is the trip to Glacier Point by way of Vernal and Nevada Falls, a distance of eleven miles, return being made over the four-mile trail by way of Union Point. Another trip of intense interest takes riders up the opposite or north wall of the valley to Yosemite Point at the brink of Yosemite Falls. This affords magnificent views of the entire 2565 feet of Yosemite Falls. Eagle Peak, tallest of the cliffs known as "Three Brothers," can be visited on the same trip.

Few thrills can equal the ascent of Half Dome, which usually can be made about the time the convention will meet, dependent on how rapidly the snow has melted at the 9,000 foot elevation. A ride of nine miles leads to the foot of the "Elephant Back," the great hump to the left of Half Dome as viewed from Yosemite Valley. It is a short walk over this to the foot of the Dome, which looms up more formidably than the dome of the Capitol in Washington. A little way up, however, and all nervousness vanishes. Steel cables on either side afford reassuring grips. Those who want added security can wear leather belts with clasps which fit the cables, to be found in a box at the beginning of the ascent. As steps are provided on the steepest slope, and the "plates" of the granite are cracked at intervals, thereby affording secure resting places, most persons think the belts unessential and only imposing burdensome weight. Rubber sole shoes and gloves should be worn on the climb.

At the top of Half Dome is one of the grandest views in the world. The most notable feature of the picture, perhaps, is the intimate glimpse into Tenaya Canyon, the granite walls of which are so steep and smooth that less than a dozen men ever have achieved its passage.

Persons unaccustomed to horses need feel no fear at mounting one of the Yosemite animals, for they are trained and gentle. However, there are motor trips of great beauty for those who prefer to travel by automobile. The finest of these is the trip to the Mariposa Grove of Big Trees, oldest and largest of all living things, California's most distinctive possessions, for they can be seen nowhere else in the world outside this State. The trip from Yosemite Valley is one of great interest, as the road goes by way of Artist and Inspiration Points, makes a circuit of the entire Mariposa Grove, including the famous tunnel tree Wawona and the American Legion Tree dedicated to the Unknown Dead in the World War, and allows ample time to see everything.

Another fine motor trip is the tour of Yosemite Valley, following the road which traverses the valley on both sides of the Merced River, affording close views of the cliffs and waterfalls.

Those who drive to the valley in their own automobiles should not fail to take the splendid fifteen-mile ride between Yosemite and El Portal, terminus of the railroad. The road is like a boulevard, and follows the turbulent Merced River up its narrow canyon, through the "Gates of the Valley"—one of the most scenic rides in America. It is interesting to note that the paved, all year highway now being constructed between Mariposa and El Portal will follow this route into the park.

For those who like to hike there are walks innumerable, long or short, concerning which information will be given gladly at Yosemite Lodge, Sentinel Hotel or National Park Service headquarters. There is plenty to do in Yosemite—something to suit every taste!

One more thing—bring your camera. Few places can provide such wonderful opportunities for pictures.

GLACIER POINT, YOSEMITE VALLEY

COUNTY SOCIETIES

Alameda County Medical Association (as reported by Dr. Pauline S. Nusbaumer, secretary)—The Society met November 21, 1921, in the Oakland Health Center with sixty members present. Dr. J. Craig Neil in his paper, "Disturbances and Treament of Defects of the Vaginal Outlet," stated that the pelvic fascia is the true supporting structure of the pelvic viscera. Any disturbance of this fascia may result in various degrees of prolapse. Cystocele is really a hernia and usually causes the most troublesome symptoms. It may exist with or without a prolapse of the uterus, and should be dealt with independently.

During the child-bearing period, the fascia should be overlapped as in the treatment of hernia in other parts of the body, and the uterus suspended through an abdominal incision. After the child-bearing period, the best results are obtained by a vaginal pan-hysterectomy with a suspension of the vaginal vault by suturing the broad ligaments and the utero-sacral ligaments together, and an overlapping of the fascia of the anterior vaginal wall to support the bladder.

That the fascia about the rectum is not so well defined, but is available and should be utilized in the radical repair of rectocele.

Dr. J. F. McMath in his paper on "Dental Diagnosis," stated that the dentist is best qualified to render a diagnosis of dental diseases of the oral cavity. But that it is not within the scope of the dentist to advise for or against the removal of teeth when they are only suspected of being the foci of an infection, in such cases the dentist and physician should consult before advice is given.

He also stated that interpretation by radiologist should in no case be given to the patient, but should be considered as only an aid to the dentist.

The doctor believes that the physician should try to familiarize himself with the general problems of the dentist.

Dr. W. H. Strietmann in his paper, "Some Observations in Regard to the Achylia Associated With Pernicious Anemia," has never seen a case of pernicious anemia without achylia. Secondary anemias of any grade were usually accompanied by a diminished gastric function. The doctor reported one case, in which there was a typical picture of pernicious anemia, and which, after four years, has had no remission, and the blood count, on the day of the reading of this paper, was normal. A secondary case, in which the blood findings were those of a secondary anemia, during the course of eight months went into a pernicious type, ending fatally.

A number of other cases of varying degrees were reported, in all of which the treatment of the achylia was the only measure employed—all of which showed marked improvement.

These papers provoked full and interesting discussions.

Dr. William H. Irwin of the Oakland Emergency Hospital staff and Miss Lucile Pallady were married December 4.

The Baby Hospital of Oakland has just completed its campaign for help, and have received $20,000 for the support of its charitable work for babies.

M. J. Holt was convicted in the court of Superior Judge George Samuels for practicing chiropractics without a license. According to newspaper accounts, Holt has been engaged in his business in San Leandro and had taken over the work of J. E. Shah-Za-De, a "Persian chiropractor," who is now in the Alameda County jail. Holt was sentenced to fifty days in jail, declining to pay the $100 fine, which would have obtained his release. According to the newspapers, Holt was paroled by the Alameda County Parole Board, consisting of District Attorney Decoto, Sheriff Frank Barnett and Chief of Police J. T. Drew of Oakland.

According to the Oakland Tribune, Alfred Bach, proprietor of a newly opened rest-cure sanitorium, was arrested for violation of the State Medical Act, section 17, making it a high misdemeanor to practice medicine or advertise as a doctor without a license from the State. Permission for Bach to operate his sanitorium was granted by the Alameda County Council after a heated argument.

Sarah I. Shuey

On November 22, 1921, the Alameda County Medical Association was called upon to mourn the loss of one of its honored members in the death of Dr. Sarah I. Shuey.

Dr. Shuey was, perhaps, the most widely known woman both medically and philanthropically in the East Bay cities. She graduated with the first class in medicine in the University of California in 1876.

Dr. Shuey was the only woman to have held the presidency of the Alameda County Medical Association, and was also president of a former Board of Health of the city of Oakland.

When the campaigns for certified milk and a probation officer were launched in this city, Dr. Shuey was among their staunch supporters, giving substantial financial aid to the latter.

At the time of her death she was a member of the California State Medical Society, the A. M. A., the Merritt Hospital staff, and attending physician for girls in the Alameda County Detention Home.

In recognition of Dr. Sarah I. Shuey's splendid work in medicine, a movement is well under way to establish a scholarship for women in medicine at the University of California by public subscription, and will have the support of Dr. Shuey's many friends.

Placer County (as reported by Dr. R. A. Peers, secretary)—The annual meeting of the Placer County Medical Society was held in Auburn, Saturday evening, December 3, in the Masonic Temple. Dr. E. E. Ostrom, President of the society, presided.

The following officers were elected for the ensuing year:

President, Dr. C. J. Durand, Colfax; vice-president, Dr. H. N. Miner, Blue Canyon; secretary-treasurer, Dr. R. A. Peers, Colfax.

In addition, in conformity with the suggestion of the officers of the State society, Dr. E. E. Ostrom of Loomis, was elected as assistant secretary. Dr. E. E. Ostrom was elected as delegate to the 1922 State meeting at Yosemite. Dr. F. E. McCullough of Lincoln, was elected as alternate.

The literary program of the evening consisted of an address on Cardiac Irregularities, by Dr. Leroy H. Briggs, Assistant Clinical Professor of University of California Medical School, and a paper on Equilibrium in Vertigo, by Dr. Frederick C. Lewitt, Instructor in Surgery, at the University of California Medical School. The subjects presented were admirably handled, and evoked much interest and discussion.

Sacramento Society for Medical Improvement (as reported by Dr. Geo. Joyce Hall, secretary)—At the regular monthly meeting for November Dr. E. C. Turner discussed "Uterine Displacements and Causes." He gave a classification of displacements, including retroflection and prolapse; description of uterine ligaments; causes of displacements and demonstrated by use of the lantern, the seven displacements, depending upon the ligaments involved. He then took up flexions, lateral displacements and inversions. Dr. C. B. Jones discussed the paper.

"The Indications for Operation in Uterine Displacements" was the subject of Dr. G. N. Drysdale's paper. He divided the displacements into five classes and outlined the indications for operating these patients. Dr. Drysdale's paper was discussed by Drs. Rulison, Lindsay, Pitts and Hall.

Dr. J. W. James presented a paper upon the "Result of Operations in Uterine Displacements," which was discussed by Drs. Pitts, Thomas, C. A. Foster, Drysdale, Yates, Turner.

Dr. W. W. Cress, Sacramento, Dr. Smith, McMullin, Folsom, Dr. Christian, Galt, Dr. Stoltz, Sacramento, were elected members of the society.

The applications of Drs. Clattenburg and Azevedo were read for the usual course.

A committee of three was appointed by the Chair to take up the question of properly considering and wording a change in the present constitution so that the secretary be elected from the floor.

San Diego County Medical Society (reported by Dr. Robert Pollock)—The papers read before the San Diego County Medical Society at recent meetings comprise the following:

October 25—"Observations on One Thousand Cases of Fractures," with outline of modern treatment of the various types of fractures, by M. C. Harding, M. D.; "The Legislative Situation as it Concerns the Medical Profession and the Public Health of California," by Walter V. Brem, M. D., of Los Angeles.

November 8—"Fractures of the Skull," by E. H. Crabtree, M. D.; "The Clinical Value of Basal Metabolism," by R. J. Pickard, M. D.; "Secondary Radical Mastoid Operation," with report and presentation of cases, by C. W. Brown, M. D.; "Renal Diabetes," with report of case, by S. A. Durr, M. D.

November 22—"Indications for Cesarean Section," by T. F. Wier, M. D.; "Mastoiditis," by F. A. Burton, M. D.; "Myelogenous Leukemia," case report by M. M. Doria, M. D.

Sister Mary Michael, Mother Superior of St. Joseph's Hospital, recently celebrated her golden jubilee, representing fifty years of faithful service as a nun. The physicians of the staff recognized the occasion by presenting a substantial memorial to the hospital, and at a dinner tendered by the sisterhood to the staff, Dr. T. O. Burger, on behalf of the latter, delivered an address of appreciation of the faithful services and self-sacrificing devotion to the sick on the part of Mother Mary Michael and the members of the sisterhood to which she belongs.

The position of laboratory technician at the county hospital has been filled by the appointment of Mr. Maxwell, and Dr. Moser has been appointed to the position of house physician; he began his services November 1. He is a graduate of Rush Medical College.

The annual election of both the medical society and medical library association are conducted on the same day, December 13, polls being open all day.

San Francisco County Medical Society (as reported by Dr. LeRoy H. Briggs, secretary)—The society held four regular meetings and one special meeting during the month of November.

The special meeting was to hear an address by Dr. Wm. R. P. Emerson of Boston, on "Nutrition of School Children." The various programs show that an unusual group of papers was presented, but abstracts on only one of these papers has been presented to the editor.

Dr. S. L. Haas discussed the subject of "Fractures in Transplanted Bone," at the meeting of November 15. Dr. Haas stated that in studying the healing of fractures in transplanted bone, one must take into consideration two processes; namely, the healing of a fracture and the fate of bone after transplantation. Each one of these processes consist of an intricate system of regenerative changes, and when there is a demand for both to functionate at the same time, the question naturally arises as to whether there will be sufficient energy for the repair of a fracture in a transplanted bone, in addition to that required for the regeneration of the transplant itself.

In order to determine this question, an entire metacarpal or metatarsal bone was removed from a dog's foot, fractured in the center, and then reimplanted in the normal position or transplanted to the muscles of the back.

In seventeen observations there were only three complete failures of union, or lack of evidence of proliferation at the end of the fragments. Firm union occurred in five of the reimplanted bones and in five of the bones transplanted to muscle. The period of observation extended from 33 to 116 days.

Conclusions—1. Transplanted bone possesses sufficient inherent reparative powers to form a union of a fracture in a transplant, without the aid of any extraneous osseous elements. This is especially emphasized in the case of union of fractured bones imbedded in muscle.

2. A fracture will unite in a bone in which there has been a complete destruction of its blood supply. From this fact it would appear that disturbances in blood supply to one fragment of a fractured bone cannot be considered as a definite cause for non-union.

Sonoma County Medical Association (as reported by Dr. N. Juell, secretary)—The society met on December 8, with twelve members and one visitor present and twenty-five members absent.

Dr. Karl L. Schaupp read a paper on "Obstetrics," and led a discussion of the subject during the evening.

As this was the annual meeting of the society, the following officers were elected: President, Lafayette J. Wilson, Sebastopol; vice-president, Henry S. Rogers, Petaluma; secretary, N. Juell, Santa Rosa; treasurer, R. M. Bonar, Santa Rosa; censors, J. W. Cline, F. O. Pryor and J. Temple, Santa Rosa; delegate, W. C. Shipley, Cloverdale; alternate delegate, J. H. Shaw, Santa Rosa.

The Sonoma County newspapers are very properly agitating the need of a hospital for Santa Rosa. One paper states that, as a matter of fact, a hospital is as much a community affair as a church, a school or a courthouse. It ought always to belong to the community and be controlled by it. True, it is a workshop for the medical profession, but so is a school for teachers, a courthouse for lawyers and churches for preachers. It is strictly a public institution, a people's affair,

operated for the people's benefit, and should never be made a place for personal aggrandizement by any part of the medical or surgical profession.

Southern California Medical Association (as reported by Dr. Michael Creamer)—The sixty-fifth regular semi-annual meeting of the Southern California Medical Association was held in Los Angeles, Friday and Saturday, November 4th and 5th. Members were in attendance from all of the counties in the southern portion of the State.

Friday morning was devoted to clinics at the various hospitals, Saturday morning and the afternoon sessions being devoted to a scientific program given by our local men and members. Many excellent and unusual papers were given, followed by interesting discussion.

Dr. Alonzo Englebert Taylor, Director Food Research Institute, Stanford University, spoke on "The Practitioner's Conception of the Dietetics. Dr. Herbert McLean Evans, Professor of Anatomy, University of California, Berkeley, and Charles A. Kofoid, Professor of Zoology of the same University, gave the Saturday evening program. Dr. Evans' subject was "Interrelation between Menstruation and Ovulation." Dr. Kofoid spoke on "Protozoan Infections of the Human Digestive Tract." The evening sessions were much enjoyed by the members of the profession and such of the laity as were interested in these subjects. A vote of thanks was given by the society to these men for the excellence of their presentation.

The following officers were elected for the ensuing year:

Dr. William Duffield, Los Angeles, president; Dr. Robert Pollock, San Diego, first vice-president; Dr. Herbert A. Johnston, Anaheim, second vice-president; Dr. Egerton Crispin, Los Angeles, secretary-treasurer.

The spring meeting will be held in San Diego, April, 1922.

A joint meeting of the society with the Western Branch of the National Urological Society and Urological Section, was held on November 17, at Normal Hill Center. The following program was given:

Vesical Neck Obstructions and Their Relief. Wilbur Parker, M. D.

A Modification of the Differential Functional Test with Phenolsulphonepthalein. Anders Peterson, M. D.

Some Experiences in the Pathology and Treatment of Impotence and the Sexual Neuroses in the Male. H. A. Rosenkranz, M. D.

Intermittent Albumen, Its Etiology and Treatment. Lantern Slides. Alexander H. Peacock, M. D.

Merced County Medical Society (as reported by Dr. Brett Davis, secretary)—The December meeting was held on the 8th with Drs. Fountain, Davis, Fuller, Mudd, Parker and Kohl present. Much of the time of the evening was taken up in a discussion of the fee schedule. Dr. C. W. Kohl presented a paper on "Lobelia, Its Characteristics and Uses in Medicine."

This being the annual meeting there was an election of officers, and the present officers were re-elected to serve during 1922.

During the fall there have been twelve cases of diphtheria with seven known carriers, and six cases of scarlet fever.

Criminal Abortion

Recent inquiries of and correspondence with the office of the State Secretary appear to indicate the advisability of reviewing briefly the situation regarding criminal abortion. Penal Code, Section 275, reads as follows:

"Every woman who solicits of any person any medicine, drug, or substance whatever and takes the same, or who submits to any operation, or to the use of any means whatever, with intent thereby to procure a miscarriage, unless the same is necessary to preserve her life, is punishable by imprisonment in the state prison not less than one nor more than five years."

It is inspiring to read the Hippocratic oath which has been morally binding upon every physician of the world for more than 2000 years. The Principles of Medical Ethics, under which every ethical physician operates, also is quite specific and definite as to the proper attitude of the individual physician or organizations of physicians on this important question.

Honest boards of managers of hospitals, with the full support and co-operation of physicians' organizations, as well as hospital organizations, are safeguarding honesty and making these criminal procedures more and more difficult in an ever increasing number of hospitals.

Recently the State Board of Medical Examiners issued a statement on this subject that ought to be interesting and instructive to physicians. It is as follows:

"The commission of an abortion is a felony, and under the criminal statutes, all felonies are directly under the investigation and prosecution of local district attorneys.

The Medical Practice Act provides that the license of the individual may be revoked for the procuring or aiding or abetting or attempting or agreeing or offering to procure a criminal abortion. The legal technicalities involved in the determination of what constitutes 'proper evidence' under the criminal code makes it a most difficult problem for the Board of Medical Examiners to handle.

It is necessary to make the following showing:

1. A woman to testify that the alleged abortion was either attempted or committed on her.

2. It must be proven by substantiated evidence that said woman was pregnant at the time she visited the alleged abortionist.

3. It must be proven by corroboration of a third party that the alleged abortionist actually performed the abortion.

4. If a dying statement is taken of the individual alleged to be dying as a result of a criminal abortion, the code requires that a statement must be taken by a representative of the district attorney's office; the statement must open with the expression on the part of the testatrix that she is about to die or that she knows she is going to die, for without such a statement the courts will not admit in evidence a dying statement.

5. The penal code further provides that the individual who approaches another soliciting that an abortion be performed, is compounding a felony; i. e., is equally guilty with the individual who is alleged to have committed the abortion."

CORRESPONDENCE

We are in receipt of the following letter and article from Dr. Philip King Brown, President of the California Tuberculosis Association:

Editor of the State Journal of Medicine, Butler Building, San Francisco.

Dear Doctor:

The enclosed circular, if published in our Journal, will enable doctors to handle some of the worthy cases of tuberculosis among school teachers who might not otherwise be able to afford sanatorium care. I would appreciate it very much if the Journal would publish this notice.

Very truly yours,

PHILIP KING BROWN.

Fresno, Calif., November 10, 1921.

Dear Teacher:

Some years ago the late Mr. Bancroft E. Beeman of Los Angeles left a bequest to the California Tuberculosis Association, the fund to be used for whatever need seemed greatest to the Executive Committee. The fund has not been touched for the reason that we wished to use it where it would do the greatest good.

For some years past there has come to the Association's notice from time to time, teachers who were suffering with pulmonary tuberculosis. In some instances the inquiry has come for advice and information, but in many other instances it has been an appeal for help. Realizing the very poor remuneration paid to teachers, coupled with the fact that frequently they have obligations to meet that makes it impossible for them to stop work when their chances for recovery are good, many of them have been obliged to teach until they have become advanced cases. For this reason the Executive Committee has decided to use the Beeman bequest for a building for teachers at the Barlow Sanatorium in Los Angeles. Dr. Barlow is one of the foremost tuberculosis specialists in the United States, and it is for this reason that his institution was chosen. The above picture is a facsimile of the building. There will be private sleeping porches and dressing-rooms.

Until an endowment can be secured for the beds the building will be supported from the proceeds of the Christmas Seal sale. We hope that the teachers in the State who may need care will feel that this building is dedicated to them for their recovery from tuberculosis.

Very sincerely,

THE CALIFORNIA TUBERCULOSIS ASSOCIATION.

Taxing the Physician

"In ancient times a barbarous people presented a peculiar way of getting rid of their sins, by the priest laying hands on a goat, which was sent into the wilderness—the scapegoat. This didn't hurt the goat or do the people any good, except those who were Christian Scientist in embryo. Since that far-off time various peoples, institutions, societies and persons have been made scapegoats. At the present time there is one society specially under ban, though it has not taken to the woods.

The medical profession is the goat, but it cannot escape. There are men and women in this profession who violate laws and bring opprobrium upon all its members; there are statute laws against such offenses enacted for the public good, which should be enforced by the public legal machinery, but in this regard the medical profession is an exception to all rules; its members must bear a special tax of two dollars per capita for the purpose of enforcing State laws, which in all other cases are enforced at public expense. Members of the profession are taxed on their possessions as high as anybody. Why should they have to pay for the prosecution of violators of the law any more than other professions? Are lawyers taxed a special sum to prosecute offenders in their ranks?

There are wicked, vicious and careless men who are willing to make money for themselves by encouraging the use of narcotic drugs and furnishing such things to the unfortunate victims of an acquired appetite—such are criminals—but very few of them are recognized members of the medical profession. The Harrison law, in many respects, is one of the wisest, but why should it penalize every honest doctor and tax him three dollars a year for the privilege of relieving the suffering of his fellow creatures?

The Prohibitory law is a public blessing, but why should it impose such burdens upon physicians who use alcohol only in a proper way? Why should it give such opportunities for selfish immoral men to make money out of the victims of the drink habit? Can anything be more supremely absurd than to give a doctor the privilege of writing one hundred prescriptions in a month and making it criminal if he writes one more? Who can tell how many of his patients will need some form of alcoholic medicine next month? Think of the tyranny of a law which will not allow a druggist to use a little alcohol in a prescription required to effect solution, because the writer, though a regular physician, has not applied for that contemptible permit to write one hundred prescriptions for a pint of booze. Who wants such a permit except the man who is willing to use it in pandering to the degradation of his fellows? Honorable physicians have to avail themselves of this permit, but I dare say every one despises such a law.

Why is the profession so tame and submissive? The unfair and ridiculous laws to which we are subjected would provoke a revolution if applied to any other class or profession."

F. E. COREY, M. D.

BOOK REVIEW

The Evolution of Disease. By Prof. J. Danysz, Chef de Service, Institut Pasteur, Paris. Translated by Francis M. Rackemann, M. D., Philadelphia and New York: Lea & Febiger. 1921.

On the basis of the reactions of the arsenobenzenes with blood serum, an elaborate theory of the "evolution" of disease is built. A critical consideration of the book will be aided by the knowledge that the basic experiments have been repeated by other observers with results, which, to put it mildly, modify any interpretation of the original facts in the case.

Nevertheless, as the author feels that there is a "complete identity of the reactions between serum and arsenobenzene on the one hand, and between serum and the biologic antigens on the other," he proceeds to develop analogies in every field of immunity.

The reader will appreciate his ingenuity, but is apt to feel that "in order to explain these things there has been created a complicated and barbarous terminology which has, incidentally, the great inconvenience of giving grand illusions with a precision which does not exist." J. O.

California Association of Medical Social Workers

(Reported by Miss Edna J. Shirpsey, secretary)

The Association held a meeting in the rooms of the San Francisco County Medical Society October 21, and another meeting on November 18. The former meeting was addressed by Mrs. John Collier on "Health Habits of Children," and the latter meeting by Dr. William R. P. Emerson on "Nutrition." Miss Margarite Wales, chief social worker of the Stanford University Medical School and Hospital, discussed the aims and purposes of the organization of medical social workers.

The speaker emphasized the importance of developing the medical aspects of social work. The great advantage of co-ordinating the work of medical social workers and the early organization of these workers with the medical profession was emphasized. Medical progress in the prevention and cure of disease must go forward as team work under the leadership of the medical profession, if it is to fulfill its function of securing the greatest good to the greatest number from the services of physicians and to protect the members of the medical profession against wasted effort and misuse of their services.

"It is especially important for medical social workers to get together, not only to work out the problems that belong so definitely to their particular province, but some opportunity must be offered for them to hear the opinions of their co-workers in the medical profession."

"For some years social work in general has had a distinct place in the college curriculum." Medical social work is much more recent, and such a course is, at present, offered in only one medical school in this country.

At the business meeting of the association, Dr. Ray Lyman Wilbur of Stanford University Hospital and Dr. W. E. Musgrave were voted honorary members of the California Association of Medical Social Workers.

Dr. Edna L. Barney, Edna F. McInerney, Marion Maxwell, Ottilie Haas, Dr. Jessica Peixotto, Rose Steinhart, Lucy Ward Stebbins, Olive McGinnis, Regina P. Horton, Sophie Mersing, Katherine Wynne, Margaret Surmoundt were elected to membership.

DEATHS

Woolley, Frederick Marion. Died in St. Helena, Calif., November 15, 1921. Was a graduate of the College of Osteopathic Phy. and Surg., Los Angeles, Calif., 1917. Licensed in California 1920.

Smith, George Sidney. Died in Half Moon Bay, Calif., November 21, 1921. Was a graduate of University of California 1879. Licensed in California 1880.

Make
Your Reservations
Early for
the State Meeting

See Page Nine of
This Issue

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VOL. XX FEBRUARY, 1922 No. 2

ORIGINAL ARTICLES

THE OPERATIVE TREATMENT OF STRABISMUS *

By WALTER S. FRANKLIN, M. D., F. A. C. S., and WARREN D. HORNER, B. S., M. D., San Francisco.

In this paper we present a resumé of forty-eight consecutive cases of muscle deviation which were treated surgically. The tables give exact details of results and other data. It is our firm conviction that no one method or procedure is superior universally, and that the end-result is more a matter of the finer details and proper following out of accepted published operations. For example, our results have been unsatisfactory with the Briggs clamp. A colleague uses this method exclusively and claims to find it satisfactory. By analogy we feel that we must have missed one or more of the finer but essential details in the published reports of the operation and its application. This point explains the multitudinous procedures and operative methods for the same condition. The author of a method obtains certain results. It is published and followed correctly, that is, presumably, but the results differ and other methods are conjured to obtain more satisfactory cures.

The Reese resection has proven thoroughly reliable in our hands, but it is essential to follow the details of the operation minutely. Occasionally a new interne or a change in surgical nurses has resulted in some modification in technic, for example, forgetting to properly wax the sutures—the annoyance and possible failure cannot be exaggerated.

We wish to emphasize the cultivation of one operative method and its application to all cases in which it applies. In this manner our judgment of quantity, so essential in muscle deviation cases, is sharpened and the operation will be done under like conditions. The majority of our cases were operated upon under general anæsthesia. It is difficult to estimate the amount of shortening required, due to the changed conditions and relaxation from the anæsthetic, but one acquires a sense of proportion after a few cases. In our experience the nervous shock to the patient under a local anæsthetic is greater than the possible nausea following a general anæsthetic. The surgeon has more freedom and is under less tension while operating upon the patient under narcosis.

The Reese resection was performed twenty-two times. The results were universally good with the exception of a few cases in which further operative measures were necessary. We have found that the suture, its strength and proper waxing, are the pivotal points of this operation.

An advancement was not done in any case. The scleral puncture has never appealed to us. The uncertainty of depth and having noted two cases of perforation in the practice of colleagues, have determined us against this procedure. We do not doubt that others may obtain satisfactory corrections by some form of advancement, but it is not our choice.

The clamp was utilized in nine cases. According to its author, a snip is made below the muscle, which we supplemented with a counter-puncture above. By this modification, the entire muscle, capsule and conjunctiva were included in the tucking. The cases were done under local anesthesia. We are free to admit that the results were uniformly bad with the exception of one case of esophoria, which is the only phoria one included in this series. The clamp changes its position after a few days, the upper end slipping downward, and in all cases careful attention was given to proper tightening, so much so that the forceps were always removed with difficulty. All cases were greatly undercorrected. Following the first poor results, special attention was given to the muscle-loop pulled through, and its fastening.

The Todd tucking was employed eleven times, and here we noted far better results in the later cases. The difficulty in placing the suture with the muscle under tension from the tucker, is greatly simplified by using a small curved mounted aneurysm needle. This latter modification can be recommended.

A few cases presented rather unusual features. In one the Reese resection was done, following a long period of radium therapy, for double-sided tubercular keratitis. The eyes had been quiescent and considered cured for over a month before the operation. The reaction on the operated eye was violent. It consisted in puffiness of the lids and marked chemosis, exophthalmus and symptoms of strangulation. We feared an orbital phlegmon, but the cellulitis cleared, with no bad sequellæ.

A young boy with congenital paralysis of the left external rectus received a moderate result by a transplantation of the outer half of both vertical recti muscles.

A young girl was scheduled for a resection. After performing the tenotomy, the eye became so free and limp in its motions that nothing further other than a restraining suture was attempted.

* From the Department of Ophthalmology, University of California.

This case presented but little improvement for her convergent strabismus, and required reoperation.

An adult, a marine, was operated upon for a convergent strabismus. At various times he had free and typically projectile vomiting sufficient to bathe the cut surfaces of both eyes and the surgeons with stomach contents. Copious lavage was resorted to, and fortunately no infection followed.

A young boy acquired a partial retinal detachment, following a small perforation of the sclera while snipping a buttonhole in the tendon for a partial tenotomy.

No attempt has been made to describe the operative technic employed, as we lay no claim to originality. The cases were operated upon according to the accepted methods, and we changed to the different operations to prove our first-stated contention, that it is the operator and not the particular method chosen which gives results. We cannot too strongly emphasize the cultivation of one operative procedure varying same only when forced to by its nonadaptability.

This is especially true for those of us who have not an abundant material at our disposal and who operate rather infrequently.

One cannot be too cautious in predicting the end-result from one operation, and the patient should be warned as to the possibility of a repetition.

We no longer assume any arbitrary age limit in determining when to operate. Every case must be decided individually. It may be stated here that orthopedic methods were consistently resorted to where indicated, and in general the surgical intervention was considered as the final means of obtaining a straight eye.

Age of Patients in Ten-Year Periods

First ten years	12
Ten to twenty years	10
Twenty to thirty years	21
Thirty to forty years	4
Over forty years	1

Diagnosis

Left internal strabismus	19
Right internal strabismus	11
External strabismus	10
Alternating internal strabismus	5
Alternating external strabismus	2
Esophoria	1

Cases of Refractive Error

Co. hyperopic astig	33
Co. myopic astig	8
Hyperopia	4
Myopia	1
Mixed astig	2

Previous Treatment

Glasses previously	39
Exercises including stereoscope, patch, atropine, etc	42
Prisms	1
No treatment	6

Type of Operation

Reese resection	22
Clamp	9
Todd tucking	11
Tenotomy only	6
One eye, muscles	28
Both eyes, muscles	20
Operated on second time	6
Second operation advised	7

Results

Good	21
Partial	10
Poor	9
Not followed	8

Office Strabismus Cases.

Case		Age	Diagnosis	History & Duration	Vision with correction	Procedure	Result and comment.
1.		34	Alternating diverg. squint	Gl.8 yrs. Couldn't pass Navy Phys.Ex.	RE 1.2 with 25S -75x10S 1.0 LE 1.0 with 25S -1.00x75 = 1.0	LE resection internus.Tenotomy l.ext. RE partial sub.conj.tend. externus	Later Rt. int. tucked.Partial tenot.R.ext. L E tenot.ext.
2.		37	Alternating Int.Strabismus	Since childhood following disease measles ? Gl. for reading.	RE 0.7 with -5.00S = 1.0 LE0.6 - 4.50S -50x45 = 1.7	Tuck -L.Ext. Rect. Tenotomy L.Int.Rect.	Later-Advance lt.int.rect. Compl.tenotomy lft.Externus. Wearing almost full correction. Straight.
3.		5	Alt.Strabismus Int.	At 14 mos. first noticed eyes turning in. At 2 yrs crossed for day at time. Glasses.	RE 6/24 - 25S - 50x15°=6/12 LE 6/24 - 50x120 6/15	Stereoscopic exercises w much benefit Op.resection rt.ext.Tenot. int.partial	Straight
4.		22	L.int.Strab.		RE1.0x1.50S 50 x15 = 1.0 LE-1.0S-1.0x150 = 0.4	Resection	Excellent
5.		20	2 mm inward turning	L vision poor Gl.14mos.Convergence to cross test	RE 1.0c-0.5x90=1.2 LE 0.3c-75S-2.0 x60=0.8	Clamp L.ext Rect.tenot. int.left Later RE. tenot.int. tuck ext.	Not good
6.		23	L. int.strab. 42° with gl. 10° s gl.	Followed pertusis aet.2. Wore gl.	RE-2.50 -62x80V = 1.2 LE-2.50 -50x60V = 0.6	Tuck left ext. Tenot. l. int.	Moderate
7.		5	Diverg.strab. rt.38° can fix with either eye	Followed chicken pox aet.2	RE3/15c-0.50S - 1.00x165 LE -75 -50x45°	Tuck rt.int Tenot.rt. externus	Much improved but still somewhat diverg.
8.		4	Int.strab. L.eye 21°	Onset aet 2mo.Gl aet 2yrs.Didn't wear same	RE3illot-.75 LE1/10illot.-.40 -1.00x90	Tuck L.ext. Tenot.L.int	Excellent

- 2 - Case	Age	Diagnosis	History & Duration	Vision with correction	Procedure	Result and comment
9.	24	Rt.int.strab. esophoria 20° Cover test +	3 yrs.of age wore glasses	RE-2.5 -.50x75= 20/30 LE20/50 -75 - 75x90= 20/30	Clamp Rt.ext. tenot.l.int. partial clamp lt.ext.	Not good
10.	17	Int.strab.alt 30°.Spastic contr.int.& limited motion ext.	Since early childhood. Gl.since 2 yrs.Stereo. exercises	RE 0.4c-2.0 - 1.5x60 0.8- LE0.5-2.5 -1.5 x110 0.8-	Resection rt. ext.Tenot.rt. int.rect.	Excellent
11.	23	Lf.int.strab.	Since childhood. No.gl.	RE 1.2c-2.00 -50 x80=1.0 LE0.1c-4.5 -75x 80 = 0.1	Advancement ext.rect. Tenot.l.int. rect	LE turned in again.5° inward turning RE. 2nd op. advised to tuck rt.ext. & part.tenot rt.int.local
12.	22	Ext.strab. RE	Since childhood	RE 0.5c-1.25Ax 110= 0.6 LE 0.6c-1.00CA 60° = 0.8	Resection rt. int.rectus. pertial ten. rt.ext.rect.	Result at op. good.Tremendous reaction post-op.Threatened abscess Ice comp.
13.	9	Rt.int.strab. Fixes with l.	Pertussis aet.5 Rt. int.strab.	RE1.0c-25-25x 100= 1.0 LE1.0c-12 -37xØ 0.5 1.0	Resect.rt. ext.Partial tenot.int.	Suture broke in muscle. Some diffic. in bringing ends together 2nd op.tobedn
14.	4	Lf.int.streb.	Influenza aet.2.Noted after same	RE .7 illot.-1.5 -25x90 LE less then 1/10 -30-75x95	Tenotomy-sub. conj.tenot. lf.ext.rect. Held by sut. to temple	After tenot (genl) immed. diverg.Held by suture to cheek.Second. op.advised.
15.	30	Exophoria 8-12°	Headaches	RE0.6-50 -25x175 1.2 LE 0.25 -25V5=1.0	Tenot.partial both extern1.	?
16.	5	Int.strab.lf. eye	Birth inj. Lf.eye swollen	RE¾-2.5 sph. LE1/20-4.0 -1.0x 100	Resection L. ext.rectus. Partial tenot L.rect.Part. tenot.rt.rect	Maximum. Eyes remain streighter.

- 3 - Case		Age	Diagnosis	History & Duration	Vision with correction	Procedure	Result end comment
17.		20	Lf.int. streb. Cover to cover test	Gl.18mos.Came re.poor vision	RE6/7-50Ca90° 6/5 LE6/20-75spk. -2cx60 5/7.0	Clemp Ext.rect LE. Tenot.int. LE.	Secondary op. 1½yr.later. Tuck rt.ext.
18.		22	R.Hyp.4°.Exoph. Rt.12°Marked to cover test	Eye worse when pt. tired.	RE 20/20-50x90 LE 20/20-50x90	Surgery advised Procedure not given.None done	Tenot.rt.int. op.done.no notes of procedure or re.
19.		21	Alternating Strabismus	Since 4 yrs. old	RE20/30-1.00 sph= 20/30 LE20/30-2.5-50x180 = 20/30	Advancement RE ext.rect. Leng.L internus	Op.done 12/21 17.Nature? Result?
20.		18	Rt. ext.strab 5 mm outward Cap.cataract	Since childhood gl 12-15yrs of age No help.	RE Ambl. LE-75sph.20/15	Resection int. rect. rt.	Another op. advised.
21.		18	Int.strab. rt.7 mm or 30°	Since ege of 3.Gl.at 4	R 1/10 L 1.0	Resection rt. ext.rect.Ten. int.rec.rt.eye	Excellent
22.		25	Diverg.streb. Rt.eye	No glasses	R 1/10 amb. L 0.5-25 -1.00 x110 6/7	Resect.rt.int. rect. Tenot. rt.ext.rect.	Better.Clamp op.leter. Finger exerc.
23		3	Int.streb. Rt. eye	Since 7 yrs. old.Fell out of bed. Gl. 1 yr.	R-3.00 -75x90 =6/6 L-3.0 -25x90 6/6	Advance rt. ext.rect. Tenot.rt. int.rect.	Stereo. exer. as follow up.
24.		57	Lf.hyp.5° Exoph.13°	Streined feelings	R-3.75-1.5x6°= 20/20 1-2.25 -1.25x180 =20/20	Partial tenot. rt.&lf.ext. rect.	Exoph.6° LH 2°
25.		2½	Lf.inwerd turning, smaller than R.Atrophy L. ext.rect.	Birth inj. L.ext.rect. atrophic	R ? L ?	Tenot.L.int. rect.Transp. ofext.half int. &sup.rect1 into ext.rect.attach	Advancement Atrophic ext. rectus. Result?
26.		36	Diverg.to cover test.Exoph 7°		R-25 -25x10=6/6 L-25 sph= 6/6	Prisms. Tenot. both ext.Clamp int.	Eyes variable Exoph 1/2°
27.		21	Esophorie near about 6°	College work	R-50 -1.0x105 20/20 L-50 -1.0x85 20/20	Op.neture?	Esoph 2° Esoph 5° Prisms 2° B out.

STRABISMUS CASES, CLINIC.

Case	O.P.D. Number	Diagnosis	History & Duration	Vision OD-Rx / OS-Rx	Procedure	Result & Comment
1.	62670	Rt.Int.Strabia.	Rt.Int.Strabia since age of 1	RE 20/15 with Rx +.75 = 20/15 LE 20/15 with + 50 = 20/15	Clamp.Shorten rt.Externus. Lengthen both both interni.	Improved.Stereoscopic exercises. Sl. int Strabismus remained.Local anes.vomiting
2.	52646	Rt.Int.Strabis. 45°	Glasses 7 yrs.	RE 20/30 +.75X90-20/20 LE 20/50 -75S=2.00 X90 20/20	Resection. Rt. ext.ract. Tenotomy rt. int.	Improved,extent not given. General anes.
3.	63174	RE Int.Strabis.	Int.Strab. RE past 1 yr.since flu. No glasses	RE fingers 5 ft. Ambly.+3.50 sph.+ 1.75X100? LE 20/60 +2.50S + 50X75 = 20/30?	Resection. Rt. Ext.Tenotomy rt. int.	2 wks. p.o. eye turned in again.
4.	54911	LE Int. Strab. about 45°	Aet.2½ hit head left side thru fall. 1 mo. later lft. eye turned in.Gl.since act.7	RE 20/20 +3.50S=20/18 LE 20/200+4.00S = 20/100	Resection.l.E. Ext. rectus.4 mm. Ten.internus.	Excellent
5.	63250	RE.Int.Strab.	Duration Aet.3 at 7 wore gl. Previous exercises & help	RE 20/200 + 1.00 X 30° = 20/200 LE 20/20 +50S +1.25 X165 20/20	Clamp. Rt.Externus. Tenotomy internus.	Anes? Improved but not straight. To return for 2nd.op.later.
6.	65975	LE. Int. Strab.	Int. Strab. LE since aet.2	RE 20/40+1.00S+50X 90-20/20 LE 3/200 No imp. Ambly.	Resection. Ext.Rect.LE. Ten.int.rect. LE.	Gen'l anes. Result good. Eye straight.
7.	72007	LE.Int.Strab.	Since childhood. Gl.?	RE 20/30 +2.50S=X90 - 20/20 LE 20/200 +1.25S = no imp ambly.	Tuck LE·Externus. Tenotomy L int.	Gen l anes. Eye straight for 1st.5 dys. Became convergent. Final res.little better than orig to be re-op.

Case	O.P.D. Number	Diagnosis	History & Duration	Vision OD-Rx / OS-Rx	Procedure	Result & Comment
8.	61343	RE Int.strab.	Since age of 6 follows pertussis wore gl.8-10 yrs.	RE20/50-25S -50x85 no imp.RE20/50 -25S-50x85 ambly.	Clamp rt.ext. Tenotomy rt. internus	Eyes straight 2 mos.P.op.
9.	48980	LE int.strab.	Since 4 yrs. following chicken pox. no. gl.	RE 20/30-1.50 S-50x180 20/20 LE20/70 No.imp ambl.	?Kind of op	Apparently not gd. Note to return 3 mos.re 2nd op.9 Mos.later.still some strab.present
10.	63871	LE int.strab.	6 yrs.ago following fall. op. as child	RE20/15-1.00S -25x135 20/20 LEfingers 5' ambl.	Lengthen LE ext. Ten. L.int.	Anes. gen. Excellent.
11.	59247	Int.strab. left eye	O.S.in since birth.Gl.from 5 - 10	RE20/20-50S= 20/20 LE fing.5' ambl	Clamp L.ext. Tenot.L int.	Genl anes. Not satisfactory.
12.	70810	LE int.strab.	Born so.	RE20/50-1.50 -1.25x90 20/20 LE 2/200ambly	Tuck l.ext. Int.ten. Suture to cheek.	Result good p.op. Eye in in 1 week. Consid. op. react. Gen. anes.
13.	69614	16°Exophoria 4°Hyperph.	Worn S.base in. headaches Gen.since 12	RE20/40-75x90 =20/20 LE20/30-75x90 =20/30	Clamp l.int. rect.Tenotomy l.ext.r.	Gen.anes.Small ulcer near N.limbus.L.eye F.D.11°. exophoria no HA
14.	57853	Strab.Rt. divarg.	Strab.since 11 mo.Forceps baby	?	L.tenotomy ext.rect.Accid puncture rt. sclera in op.	7 mo.later retinal detachment found rt.eye.Size increased in next 8 mo. Fundus not visible
15.	66699	Int. strab RE	Duration? Tenot.rt.int. rect.5yrsago	RE20/200 no imp.ambly LE-1.00S-50x 90 20/20	Clamp Rt.ext. rect.	Result? Complained of lump.left by clamp. Anes.gen.
16.	44946	Strab.15° Conv.Fixes & rt.eye alt.	Strab.follows pertussis aet 2.gl.& exer.	RE20/30-4.00S =20/20 LE20/20-4.00S =20/20	Op. kind not spec.for strab	Convergence 15° Result? Anes.local
17.	42777	L.int.strab.	Since 3mos. gl.6 yrs.	RE20/50-1.25S -50x180 20/15 LE fingers 4' ambly	Tenotomy Lf. int. Fixation sut. canthus	1.mo.later 15° int strab OS.Reop-Advancement 3 mos.late Result?

STRABISMUS CASES (con't) CLINIC.

Case		O.P.D.	Diagnosis	History & Duration	Vission & Glass	Proceedure	Reault and Comment
18		56507	Int. Strab. R.E.	Dur.1½ yrs. gl. 1 yr.	RE 20/30+2.00 +75X20 20/15 LE 20/30+2.00 +1.25X150 20/15	Resection Ext. Rt.partial tenotomy,rt.internus.	Gen. anes. Eyes atraightened
19		43184	Diverg.Squint Rt. eye. Diverg.30°rt.	10 yrs.ago hurt rt. eye on chair corner. Grad. turning out since.	RE 20/15?-1.00 sph. LE 20/20 ?-1.00 sph.	Rt. int. rectus mass of scar tissue. Could not advance, same enuf.	Advised that advancement of lft. int. rectus be made later.
20		45122	Int. Strab. L.E.	Aet.4 mother noted lt. eye turn in. Gl. since.	RE 20/20+2.00s +75X40 20/20 LE 20/50-2.50= +50X180 20/30	Resection L.E. Ext.rect.Resection R.external rec.Tenot.rt.int rectus.	Reault P.O. perfect
21		47483	cExt. Strab. left.	3 yrs. ago follows pneumonia.	RE 30/20+3.00+ 1.00X120 20/20 LE 20/200 not imp.ambl.	Resection rt.ext rectus. Tenotomy left internus.	Eye Straight.

UROLOGICAL DIAGNOSIS*

By GEORGE F. FARMAN, M. D., Santa Barbara, Calif.
From the Santa Barbara Clinic

The diagnosis of diseases of the kidney is becoming more and more a matter of scientific accuracy. In a large measure this is due to the perfection of cystoscopic technique, radiology, pyelography, blood and urine analysis, and renal functional estimation. Opinions as to the proper treatment are frequently at variance, but the fact remains that our estimate of kidney pathology may be made quite accurately in by far the great majority of cases.

In spite of these facts, there still exists a widespread laxity among members of the medical profession in regard to the diagnosis of genito-urinary conditions. This is mainly due to three factors:

1. The common practice of empirical treatment in the genito-urinary tract.
2. A lack of knowledge of the pathology of diseases of the kidney.
3. The necessity for special examination in the diagnosis of kidney conditions.

The common practice of empirical treatment in lesions of the genito-urinary tract should be discontinued. Too often we prescribe for symptoms of urinary disease, without sufficient study to determine the true cause of the condition. Fortunately many symptoms disappear temporarily under empirical treatment, but the pathological process may remain to further damage the kidney, and allied organs.

Roughly, we separate cases of urinary disease into two great groups, Nephritis, and Cystitis. In treating nephritis we outline a diet and in treating cystitis we often prescribe a drug, while the important causes of both diseases remain unrecognized and untreated. Cases of supposed simple nephritis we may later discover are cases of renal tuberculosis, renal calculi or infected hydronephrosis, and likewise supposed simple cases of cystitis we later discover are cases of bladder stone, bladder tumor, prostatitis, or disease of the upper urinary tract.

A correct understanding of the pathology, as well as the chronic nature of diseases of the kidney is necessary before correct diagnosis can be made and adequate treatment administered. Years may elapse between the onset of kidney lesions and their culmination into frank disease entities. Careful questioning of the patients usually illicits a history of previous urinary distress or discomfort along urinary tract.

Acute urinary diseases of the inflammatory or obstructive type usually are manifestations of underlying more serious conditions. Typical of this are the cases of acute pyelitis manifested by the symptom complex—pain in the back, frequency, burning, and pyuria. Acute pyelitis occurs more often in those type of kidneys favoring infection of the real pelvis due to abnormal mobility, congenital or acquired anatomical defect. Acute kidney colic is caused by obstruction to the urine outflow in some part of the urinary tract. The obstructing process may be within the lumen of the urinary tract, common examples of which are pelvic and ureteral calculi; within the wall of the tract iself such as inflammatory or traumatic stricture or without the lumen, the most common example being the pregnant uterus. Repeated acute attacks of inflammation or obstruction lead to dilatation and distortion of the urinary tract, favor infection, urinary stasis, stone formation and destruction of kidney tissue. Kidney cells once destroyed are not replaced, but their function compensated for by hypertrophy and hyperactivity of the remaining normal tissue.

The kidney is not a readily accessible organ, which no doubt accounts for delay and failure in diagnosis of kidney lesions. We are want to make a pass at kidney palpation, do a hasty urinalysis, and send the patient on his way with a prescription for one of the many urinary drugs. If we are to recognize kidney lesions at their incident, we must put our patients through a routine of careful history taking and physical examination; through routine radiography of the entire urinary tract, through detailed blood and urinary analysis, and through the usual urological procedures.

Cystoscopy offers a safe, rapid, objective means of examination invaluable in the accurate localization of lesion of the genito-urinary tract; and every case presenting symptoms should have the benefit of such examination unless contra indicated.

* Read before the Santa Barbara County Medical Society, May 23, 1921.

The urologist stands in mid-position between the internist and the surgeon and insures the better surgical treatment of medical patients and the better treatment of surgical patients.

The physician is inclined to delay and the surgeon to pass up urological study. There is need for the closer correlation of the medical and surgical viewpoint in urinary diseases.

Illustrative of the above statements we cite the following case:

CASE REPORT

Mrs. B. O. Complains of recurrent attacks of right-sided colic and constant backache. Fourteen years ago during her first pregnancy she had considerable backache on the right side. Three years later she had a definite and rather typical attack of renal colic. There have been a number of similar attacks since that date, the last one eight days ago.

The patient is 34 years of age, the mother of two children, and aside from the renal colic has enjoyed good health. The right kidney is palpable as a tender mass opposite the umbilicus. No other physical findings of importance.

Cystoscopy shows mild generalized cystitis, marked congestion and cystic edema below right ureteral orifice. The right ureteral orifice appears larger and more retracted than normal.

The bladder urine contained 160 pus cells per c. mm.; the urine from the right kidney was very dark in color, ammoniacal, contained 22 pus cells per c. mm.; urine from left kidney clear, and contained 20 pus cells per c. mm. All three specimens were culturally negative and negative for tubercle bacilli.

The phthalein test showed an output of 10 per cent on the right side and 40 per cent on the left.

Plain X-rays made with shadowgraph ureteral catheters insitu, showed a calcified circular shadow, the size of a hazelnut at the end of the right ureteral catheter.

Pyelogyram of the right renal pelvis, using 24 cc. of a 10 per cent solution of thorium nitrate for the opaque medium, shows the right kidney in a low position about midway between the twelfth rib and the iliac crest. There is large hydronephrosis of the renal pelvis; destruction of the minor calices with clubbing of the ends, and the formation of individual rounded areas.

From the above data a diagnosis of nephrolithiasis and hydronephrosis was made. Plates made two days later continued to show the presence of the calcified shadow in the right kidney area.

Right nephrectomy was performed February 25. The patient left the hospital twelve days after the operation following an uneventful convalescence.

Pathology: The kidney measures 11:25 cm.x 5.3x5.0 cm. and weighs 187 gm. There is a navy bean-sized, brown, mulberry-like, hard calculus lodged in a minor calyx of the lower pelvis. The renal pelvis is divided into three compartments, the pelvis proper, the upper major calyx, and the lower major calyx. The mucosa of the pelvis proper is thickened, edematous, and stained brown by old blood. The wall of the pelvis is tough, thickened and sclerotic. The upper major calyx forms one large single sac, connected to the pelvis proper by a narrow diverticulum-like opening. The mucosa of the upper calyx appears quite normal.

The lower major calyx is further subdivided into three or four minor calices, in one of which is lodged the calculus.

A large amount of fat and tough fascial striae enclose the kidney hilum and pedicle, showing evidence of peri-renal inflammation. Histological sections show chronic glomeurlo nephritis; parenchymatous degeneration of tubules; slight intertitial changes.

Chronicity of Kidney Disease.—The outstanding features in this case are first, the chronicity; second, the pathogenesis; and third, the method of cure.

This patient gave evidence of urinary disease for fourteen years. The principal symptom was a more or less constant backache and occasional attacks of renal colic. Too ofen these patients are classed as neurotics. An organic basis usually may be found for the neuroses accompanying such genito-urinary symptoms. In this patient the constant backache was due to the abnormal mobility of a chronically inflamed kidney.

The method of cure in this case may seem a bit radical. We are taught that simple pyelotomy, for stone in the renal pelvis, is the operation of choice. This is true of uncomplicated cases of pelvic stone, but where abnormal mobility or hydronephrosis exists total nephrectomy offers the greater percentage of permanent cure.

Compulsory Health Insurance, State Medicine, Venereal and other free clinics, and many other social uplift schemes requiring the energy and thought of the members of the medical profession are but stepping stones to socialistic medicine, which not only puts individual incentive and practice out of commission but will place the whole public under the rule of inefficiency. Perhaps we hear someone say, "Well, what is to be done?" to which we answer, in the words of the Illinois Medical Journal, "quit giving approval to these various cross-eyed medical uplift schemes advocated by erstwhile reformers and public welfare peddlers who usually see in their schemes some avenue for profit." Some of our medical men who have acquired wealth and social position seem to think that it is quite the proper thing to approve of these various uplift schemes in order to bask in the sunshine of the mighty, forgetting that in the security of their own economical position they are tramping upon the toes of their less fortunate brethren. In reality this "dear public" and "love of humanity" stuff is greatly overworked. (Editorial Notes: The Journal of the Indiana State Medical Association, page 435.)

Medical Peonage in Michigan—Those interested in the developments of socialized medicine should read the press clippings and editorials in the lay and medical journals of Michigan and nearby States. The whole thing makes a sorry story of the harm a few unchained parlor socialists can do when they get control of the policies and practices of a great university. It is to the credit of the good name of Michigan physicians that, in order to carry on its present policies, the State University must import recruits.

TONSILLECTOMY

By LIEUTENANT JOHN W. GREEN,
Medical Corps, U. S. Navy, 814 Carolina Street, Vallejo, California.

The only excuse for further discussion of tonsillectomy, is the continued failure of a great many operators in carrying out a perfected technique which results in complete removal of the tonsil and its capsule, at the same time avoiding postoperative adhesions and contractions, and having a good cosmetic result in the throat. It is much satisfaction to the patient, a year or two after operation, to have it said, "That was a splendid operation," instead of, "In my opinion there are fragments of the tonsil remaining which must be removed." A good, thorough operation should be done much oftener than is accomplished at the present time. After some ten years of effort and constant thought, and for the benefit of those who have not a perfected technique as yet, I will endeavor to set down a few points which may be of material assistance in deciding when and how to operate successfully.

The indications for operation are, chronic tonsillitis, frequent recurring attacks, with or without joint pains, tachycardia, anemia and choreform movements; hypertrophy with difficulty in swallowing, breathing and speaking, chronic eustachian salpingitis, catarrhal otitis media and chronic throat cough.

It is considered necessary to estimate the speed of coagulation of the blood prior to operation, to rule out the various types of bleeder. I firmly believe that anything above six minutes may result in serious hemorrhage, and the patient should be so advised and treated with horse serum, calcium lactate and gelatin for a period of ten days before he comes to operation. It is also considered inadvisable to operate women at or near the time of menstruation. Do not operate during an attack of tonsillitis. The patient may have diphtheria or scarlet fever.

The choice of anesthesia for children is ether, given with a pump and suction machine. This simplifies the technique and saves time. A local anesthetic is preferable in adults. More careful work can be done by this method of anesthesia. You can see at all times just what you are doing. I prefer 1 per cent procaine or novocaine with the addition of three minims of 1-1000 solution of adrenalin chloride to the cc. of anesthetic. In extremely nervous adults a hypodermic injection of morphine and atropine, perhaps supplemented with painting the pharynx and faucial pillars with 10 per cent cocaine solution, and with a little reassurance by the operator, will dispel all their apprehension.

The patient should be prepared for the operation by having received a cathartic the night before and by not having taken food or fluids for six or seven hours. Wash the face with tincture of green soap and follow with 1-3000 bichloride solution. Cover the scalp and body with sterile towel and sheet. The pus basin used for collection of sputum should also be sterilized. The instruments should be properly boiled and the surgeon's hands should be scrubbed and gloves should be worn.

When using a local anesthetic, inject about ¾ cc. in each of three points on each side. Inject behind the anterior pillar, in the supratonsillar fossa, posterior to the anterior pillar at the lower pole of the tonsil and midway between these two points. The depth of the injection should not be over an inch and should not extend through the capsule into the gland. The joints of the syringe, as well as the piston, should be tight to insure proper infiltration of the tissues. By injecting the left side first and later the right side, one can operate immediately upon the left tonsil without pain. In this way no time is lost. It is not necessary to wait fifteen or twenty minutes for complete anesthesia.

The method of choice is dissection and enucleation. Some operators prefer a Sluder, Beck-Sluder or La Force tonsillectome; but I prefer dissection and snare, inasmuch as, with a large amount of scar tissue from former operations or abscesses, all operators are obliged to resort to the dissection method. Care should be taken not to injure the palato-glossus or the palato-pharyngeus muscles.

Start the incision at the junction of the capsule and mucous membrane along the anterior pillar and carry it down to the fossa triangularis, being careful to make it superficial. If the incision is deep, the capsule is opened and dissection becomes very difficult. Use a knife or scissors for the continuation of the dissection. Blunt instruments and force will produce pain. I prefer to use a Betcher tonsil scissors for this work. The instrument has a long handle and a blunt blade curved on the flat. Work close to the capsule, cutting or spreading with the blades in that direction. The scissors will follow the capsule very closely, leaving practically no muscle fibers on the capsule. Where scar tissue is present a much more extensive dissection is necessary than in the uncomplicated case, because the snare may strike the scar and ride over it, deeply in the muscles or pass through the capsule, leaving a part of both tonsil and capsule in the wound. Carry the dissection well down the posterior pillar on its anterior surface and be careful, in putting on the snare, not to include the uvula. Its removal is not serious from an anatomical standpoint, but from the cosmetic angle it is a most serious blunder.

In applying the snare, point the barrel toward the junction of the anterior pillar and the base of the tongue. Both tonsils can be enucleated by this method in from ten to twenty minutes, depending on the conditions. This includes the time spent in infiltrating the tissues. All bleeding points should be caught and ligated with No. 0 plain catgut on a small full-curved needle. Catch the bleeder with a tapering-pointed hemostat. Pass the needle through the muscle just below the point of the hemostat, pass the long ends of the ligature over the hemostat and tie a square knot. Such a ligature will not become untied or slip off.

The use of styptics is not desirable on account of sloughing and secondary hemorrhage. The most common bleeding encountered is in the supratonsillar fossa and is usually venous from the plexus of veins surrounding the gland. Branches of the posterior tonsillar artery, superior tonsillar artery and the anterior tonsillar artery are some-

times cut. There is very little danger of injury to the carotid. Rents in the pillars should be repaired immediately. Be sure to have the incision line (line of the anterior pillar) straight and clean and uniform on the two sides. The height of the incision should be alike on the two sides to have the best cosmetic result.

If you would avoid serious hemorrhage at all times, keep close to the capsule with your dissection. This will also avoid mutilation of the pillars with serious fatiguing adhesions and contractions of the pillars. Undue speed in operating results in hemorrhage and unsatisfactory results. Take your time. The primary incision is the most important and avoid passing through the capsule at this time. When the operation is finished, inspect both the tonsillar fossæ and the tonsils to see that no capsule or gland remains. This will insure favorable criticism when the throat is inspected by the next man who may be called upon to examine the case. It is most embarrassing to have it said that your work must have been that of an amateur.

Following the operation, the patient should be put to bed, without food or drink for at least twelve hours. He should be advised to keep as quiet as he can and not to attempt to clear the throat. An ice collar should be placed about the neck. The following day liquid may be given, and the following day, soft diet. The patient should gargle his throat frequently after the first day until complete healing takes place. As a rule the wounds will heal completely in from ten to fourteen days, in the absence of complications or constitutional disease. In case of mutilation of the pillars, healing will be very slow. In some cases the cervical glands will become infected, but rarely suppurate, and they do not, as a rule, require removal. In such cases, tonics, good food and fresh air will usually effect a cure. About the third day inspection often shows what appears to be a very bad looking wound, due to swelling in the plica triangularis, which is many times covered by follicles of lymphoid tissue. At the time of operation it is well to inspect this area and remove the lymphoid tissue, if necessary. Lung abscess occasionally occurs with local as well as general anesthesia. I know of no way to prevent this accident other than the most scrupulously clean operating. As a rule the voice is improved in strength and quality, and rarely suffers fatigue as the result of a well planned and carefully carried out technique.

In closing, a word should be said with regard to dealing with hemorrhage. Primary hemorrhage will rarely occur if the bleeding vessels are ligated with an anchored suture as described. Provided it cannot be controlled by the above method, a sponge may be sewn between the pillars, but should not be allowed to remain for more than thirty-six hours, for fear of sloughing and infection. Various sorts of tonsil clamps have been devised for control of severe hemorrhage, but they are painful when applied, and also produce sloughing when allowed to remain long in place. The usual treatment for severe hemorrhage has to be resorted to in rare cases—e. g., bandaging of the extremities, raising the foot of the bed, hypodermoclysis, Murphy drip and blood transfusion after typing. Morphine in full doses will relieve the extreme anxiety of the patient. Intravenous injection of iron cacodylate will serve well as a blood builder and tonic following hemorrhage, and assures the patient that you are doing something to speed up his convalescence and recovery.

INADEQUATE PERSONALITY WITH SPECIAL REFERENCE TO ITS INFLUENCE ON BOTH DIAGNOSIS AND TREATMENT

By ROSS MOORE, M. D., Los Angeles.

Someone said or wrote, "There is nothing so real as the imagination." He meant the same thing the other sage did, who said, "Nothing ever exists except first in the imagination."

This paper does not deal with things of the imagination but does seek to make real a phase of diagnosis and therapeutics that is considered by many busy practitioners so unreal as to be almost imaginary. We are at a sort of turning point in the practice of the healing art. The profession is gradually realizing that the man whose eye is glued to the eyepiece of the microscope is not in the position of most usefulness to a suffering humanity.

It is a worthwhile task for the Neuropsychiatrist to help the profession in its efforts to practice good healing. This can best be done by insistence on that idea so well expressed in the last line of an old poem:

" 'Tis not the body but the man is ill."

This means the study of personality in its relationship to disease.

My thesis is this: Symptoms and symptom complexes may be due not only to organic and functional causes, but also to what might be called temperamental causes. Surgeons naturally tend to believe in the organic basis of most symptoms. Frequently before and occasionally after operation they admit that seemingly organic symptoms may have had a functional basis. Physicians more readily agree that functional causes may be responsible for symptoms and symptom complexes that look decidedly organic. The daily experience of Neuropsychiatrists leads them to add "Temperament" to these other two sources of symptoms, thus completing an etiological trio in my opinion capable of including all disease manifestations. In psychiatry this etiological temperament is spoken of as "psychopathic personality." A more inclusive term to designate what I have in mind is, "inadequate personality." The word "inadequate" almost exactly expresses my concept of this personality. It is an etiological rather than pathological personality. It includes all types of personality likely to give rise to symptoms, but should not be applied to the feeble-minded.

If I succeed in elucidating my thesis by proving that temperament should be equally considered as a cause of disease alongside of the functional and organic causes, then a corollary appears; viz. that,

* Read before the Fiftieth Annual Meeting of the Medical Society of the State of California, Coronado, May, 1921.

whatever symptomatology is actually due to the inadequate temperament must be considered as being permanent.

Temperament is just as inborn and fixed as the color of one's eyes or the length of one's nose. Symptoms due to temperament should not be called symptoms, but characteristics.

This paper is written to call attention to some of the types of inadequate personality, so that the therapy of general practice may be directed away from an effort to cure characteristics. These characteristics are to be brought to the attention of the patient in their true form so that he may adjust himself to considering them as permanent handicaps, and therefore not be irritated by their presence but rather learn to ignore them in his program through life.

Speaking generally, the personality of an individual may be inadequate in four ways: (1) physical, (2) neural, (3) moral, (4) emotional. A given individual may exhibit one or a combination of these types.

The psysical type of the inadequate exhibits in his physical makeup an unbalance so extensive as to make him unfit to cope with physical emergencies. He may be small and slight of build or tall and very slender. He frequently has abnormally small hands and feet, as if nature realized the sorry joke she was perpetrating when she allowed the individual to be born, and tried thus to mark him a parasite and not a worker. This physical type has been quite well recognized for a long time. He is, therefore, less misunderstood by his hurrying fellow humans, and his busy physicians. Physical inadequacy is found associated with neural and emotional inadequacy very frequently. Probably less frequent with moral.

The neural inadequate turned up frequently in the work of the neuropsychiatrist in the army both in this country and France. I personally came to the conclusion that he was the one particular type of the inadequate whom I felt must be kept from front line service. He is usually bright, smart and active both mentally and physically, but with little reserve. He is parallel in his neural makeup to the person whose mind or intellect is characterized by the term "shallow." Superficial observation would not lead to the detection of his actual inadequacy, because he learns to camouflage it by a show of transient vigor, much as the shallow intellect can cover itself by a temporary show of brilliancy.

The moral inadequate is the individual who stopped his human or civilized development at the period in life when it is said that a child is inherently cruel. He has modified his outlook on life only as much as is necessary to keep him from getting into uncomfortable situations. He cannot sense what is meant by altruism. He is a curious combination of thoughtless impulsiveness with carelessness of consequences.

The emotional inadequate is very difficult to describe. He is not necessarily emotionally unstable and may even appear emotionally barren. His type merges quite insensibly into that of the repressed individual—the unfortunate who has had emotional sterility thrust upon him. Indeed it is quite to be expected that the emotional inadequate will come of repressed parentage and, therefore, will be both temperamentally and developmentally inadequate. The experiences of life will have more influence on this person than on any of the other types of inadequacy. Whereas the neural inadequate will usually react very quickly to his surroundings, the emotional type may do the same or apparently not react at all. Nevertheless, his emotional reaction to his experiences and his suroundings is going on deep within him and inexorably produces a pathological personality later on because of that immobility which is inborn.

I have suggested these four types for purposes of description. They seldom exist in pure form. Whether they are pure or all mixed together in a given case is quite immaterial, providing it is recognized that they actually do exist. Inherent or inborn inadequacy being established, it remains for the therapist to manage his patient, his patient's friends, and the general surroundings and conditions so that these characteristics of inadequacy are adjusted for rather than an attempt made to remove them. The above presentation is totally incomplete and is designed simply to be suggestive.

CASE REPORT

A case in point. Unmarried girl, twenty-two. Physically small. Small unused hands. Father, a quiet, reserved successful business man, who knows how to work, but not how to play. Mother physically inadequate and repressed. Patient developed cardiac lesion at twelve years of age. Has been an invalid ever since. Dabbled a little in art, and has read widely in field of romance. Has very good taste, uses good English, and is very pretty and attractive. Considers herself a hopeless invalid and, therefore, has no outlook on the future. Romances about life and marriage, but does not look upon any young man as attainable in the way of a husband for herself.

Here is a combination of physical, emotional and neural inadequacy, with the added handicap of maternal repression and insistence on the fact of invalidism.

It was determined that the cardiac condition was negligible. It remained to determine how much of the residual symptomatology was temperamental and permanent, and how much was due to maternal inadequacy and the inevitable introspection of the shut-in. Some months of therapeutic effort sufficed to clear up most of the symptomatology due to these latter causes. The result was that the patient began to fearlessly ask questions about life and sex, and self; began to think and act for herself; began to make a place for herself in society; began to attract the young men—in short, is approaching a condition that should be considered normal for her. She had gone along for several years having medicine given her for her heart, being curetted, being sanitariumed, and being invalided, because an effort was being made to correct the whole clinical picture.

If this concept of inadequacy had been in the minds of her physicians, they would have made this differentiation between removable and irremovable symptoms; would have cleared up the former,

and helped the patient to adjust her life so that the latter would be the least possible handicap.

CONCLUSIONS

1. There is such a thing as inadequate personality.

2. It is congenital and irrecoverable.

3. It manifests itself in the physical, neural, moral, and emotional parts of human nature.

4. It gives rise to symptoms which may simulate closely those of organic or functional disease and which may be mistaken for evidence of the latter.

5. It is usually associated with acquired illness.

6. When it is so associated all therapeutic effort aimed at relieving symptoms caused by it will end in disaster.

7. When its presence is recognized and taken into therapeutic consideration much improvement can be brought about in the patient.

8. Its presence will be determined by careful consideration of the history of the patient rather than by examination.

9. The history necessary for diagnosis does not relate to previous illnesses sustained, but to the reaction of the patient to his environment and all data capable of giving a true estimate of that intangible thing called personality.

THE SPECIALIST AND HIS OBLIGATION TO THE PROFESSION *

* Chairman's address before Urological Section.

By GEORGE G. REINLE, M. D., Oakland

As members of the medical profession we hold an unusual position in the social structure and we have an obligation to render our best service to the public. We stand in the generally accepted position of mentors and advisors in matters pertaining to health. Less generally recognized, however, and of much the same character, is the obligation of the specialist to the balance of the medical profession. As the public has conferred upon the whole profession certain privileges and exemptions which must be repaid by a special regard, so has the profession permitted the specialist certain exemptions and is, in return, entitled to even greater considerations.

I should like at this time to call your attention to some of those things about which you have all thought, and upon which you all entertain well-developed ideas, which, unfortunately, you either keep to yourselves or express only in private. I have reference to those obligations which the specialist owes to the profession, and, conversely, what the specialist should expect from the profession in general.

Specialists are prone to be critical in their views, and intemperate in the expression of their opinions, concerning the character of the work accomplished by men doing both general medicine and general surgery. Not infrequently we hear complaint that cases which drift to the specialist have been treated overlong and inappropriately by those unprepared to render the proper service. This fault applies to specialists in every line. The oculist inveighs against the neglected case of tracoma which has lapsed into hopelessness, and he also has other things to which he takes exception, more or less privately, or to lay friends. The aurist bewails the palliative treatment of running ears, which come to him as acute mastoiditis. The urologist finds fault with infected kidneys, tubercular and otherwise, which have been treated by useless bladder irrigations, urotropin and probably vaccines. The urologist also has numerous other faults to find with the management of patients whom he feels should have been treated differently or correctly diagnosed at an earlier date.

These fault-findings are not entirely just. If the patients whom a specialist should have seen, either in consultation or directly, are not brought to his attention at the preferred time, the fault lies with the specialist himself, and should feel rather acutely that he has been remiss in one of the principal debts he owes to the profession. The specialist has neglected to convey to his colleagues the cardinal indications for consultation. It may be argued that the indications are well known, that text books point out where specialized skill or knowledge should be made available. This plea is insufficient. One needs but to recall the fact that the volume of medical literature is very great, that the important is so closely interwoven with the relatively less important that not infrequently only the specialist himself can say what is vital and what is not.

What is needed is that the specialist be a propagandist—a special pleader—not for himself, nor his profession, but for humanity. Most of the writings of medical men are addressed to the group doing the same type of work as themselves. What is needed is that the specialist address himself to the profession, writing and speaking, not about the unusual, but about such commonplaces as stone in the bladder, stone in the kidney and tubercular kidney. His literature, addressed to the profession at large, should be instructive, warning of the dangers possibly lying back of a frequency of urination, of certain microscopic urinary findings, and so forth.

These articles should indulge in plain speaking. No harm can be done, and good will result from articles couched in terms of humanity, rather than in the somewhat less startling terms of science.

There are many reasons why men in general practice treat patients which in their very nature require special skill, and most of these reasons are not selfish. Consider that nearly every individual or family has an acquaintance with some medical man. The patient presents himself with frequency, because of pyurea or some other urological symptom. The matter may not be looked upon by the patient as being of particular importance. The physician, untrained in the significance of the symptoms, and through years of experience having reached the conclusion that the majority of human ailments are transitory anyway, hopes for a passing of the trouble, resorts to some innoxious palliative treatment. The patient who does not realize the difference between the significant and the trivial may insist upon con-

* Read before the Fiftieth Annual Meeting of the Medical Society of the State of California, Coronado, May, 1921.

tinued treatment by the physician of his choice. The matter *may* be of practically no importance, and again it may be of the gravest importance. That the differentiation is not made is solely the fault of the specialist. The specialist should have impressed upon the profession at large the high lights of his specialty, as, for example, a manufacturer of automobiles impresses upon the general public the selling points of his machine.

Another obligation the specialist owes to the profession is to unmistakably convey the idea that the referred patient is at all times the patient of the medical man referring the case. At no time nor under any circumstances is the patient the specialist's patient, except for the condition pertaining to his specialty, and then only by the positively expressed wishes of the colleague who referred the case. If a case is sent to a specialist for examination, professional courtesy and even common decency demand that the patient, after an examination, be referred back to the original physician. Let it be the referring physician's right to suggest to the patient that he avail himself of the specialist's further services.

If a specialist is treating a patient and a member of his family consults the specialist, the patient should be directed to consult the physician through whom the specialist made his contact with the individual or family. That the specialist may consider someone else more competent, does not alter this conclusion. All specialists realize this and the majority adhere to our established ethics upon the point. However, I fear we have not made our stand in this matter absolutely clear and unmistakable to the profession at large.

We have dwelt somewhat upon our obligations, but, as in all affairs of life, these obligations are more or less reciprocal. What are the obligations of the internist and the surgeon to the specialist? To the specialist the general practitioner owes nothing except courtesy, but his duty to the public should oblige him to seek the specialist's assistance in those cases which in his heart he feels are not receiving from him the best that may be had.

The physician and the surgeon owe it to the patient and to themselves to take advantage of counsel with the urologist in every case of doubt. Suprarenal abscess, for example, may not uncommonly be diagnosed only after pyelograms. Diagnosis of ureteral calculi, renal calculi and even vesical calculi cannot be made with certainly without a urological examination. Kidney infections with colon bacilli, any of the cocci or bacillus tuberculosis, require and are entitled to receive a complete urological examination.

Your attention is invited to the interesting figures so ably presented by Dr. Cecil, regarding various kidney conditions erroneously diagnosed as something else. Out of a series of three hundred cases investigated, Cecil reported thirteen cases who went to operation for appendectomies, gall-bladder drainage and other abdominal conditions suspected but not demonstrated. He reports eight cases the diagnosis of which was erroneous but which did not go to operation; these mostly suspected appendicitis. A competent urological examination would have prevented these unfortunate mistakes.

From the surgeon's standpoint it is humiliating, and from the patient's point of view it is discouraging to be operated upon for a trouble not found to exist. It is such things that make patients doubt and distrust the profession. The surgeon has no right to damage the reputation of himself and his fellows by neglecting to avail himself of timely counsel. To the end that he may have no excuse that he does not know when this counsel should be sought, it is for the urologist to impress upon the whole profession the indisputable fact that pyurea, hematuria, and pains, whether of the presumably renal type or abdominal or gastric, should be, so nearly as is humanly possible, accounted for before resorting to surgery.

To the physician we must protest that vaccines alone are not an infallible cure for kidney infections, nor are they, unsupported by ureteral catheterization and lavage of kidney pelvis and ureter, ever to be depended upon as a sole therapeutic means. To the physician, also, we must protest emphatically that ureteral catheterization is *not* the cause of kidney infections, and that the physician who counsels against it with no better argument than this, reflects scant credit upon himself as not being conversant with the best of modern opinion supported by the results of research.

In closing, I repeat that the urologist and every other specialist as well has done much less than his duty to his profession and to the public when he fails to keep before the minds of his colleagues the things about which they must not waver.

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A REPORT OF THE WORK OF THE RADIUM DEPARTMENT OF THE UNIVERSITY OF CALIFORNIA HOSPITAL, BETWEEN APRIL, 1920, AND APRIL, 1921.

By LAURENCE R. TAUSSIG, M. D., San Francisco,
Director of the Radium Laboratory of
the University of California

The purpose of this report is to place before the members of the medical profession a brief account of the policies and activities of the radium department during the year following the installation of a radium emanation plant at the University of California Hospital. In the early part of 1920 an order was placed by the University for an amount of radium sufficient to bring the total supply up to about 650 milligrams. At the same time a plant for the purification and tubing of the emanation was ordered. This plant was put in operation with a little over 600 milligrams of radium element in solution early in April and has been operating steadily ever since except for a few shutdowns to remedy minor breakages.

When the emanation plant was installed it was thought by a number of medical men that the supply of emanation would be practically unlimited and that it would make radioactive applicators available to anyone desiring them. This, of course, is not true. The amount of emanation on hand at any one time cannot exceed in activity the amount of radium in solution, and for a number of reasons, this maximum is never reached. It would be unwise to diminish the total amount available by the outright sale of any of the tubes. The Radium Committee decided that it should be applied only under the supervision of a member of the radium staff, in order, insofar as possible, to insure the best results. Clinic and ward patients, treated at hospitals affiliated with the University, are charged according to their circumstances. This charge is set by the social service department after appropriate investigation. Many of these patients receive treatment gratis. Private patients, either in the University Hospitals, or in other hospitals, are treated only in consultation with a member of the radium staff and are charged a definite fee according to the amount of emanation used. Private cases which are sent from medical men out of town are treated according to the indications as determined by any further examination deemed advisable and are referred back to the physicians sending them with suggestions for the after treatment as well as an account of the findings and methods of treatment employed. It is the policy of the department to answer inquiries from members of the profession as to the suitability of specific cases for radium therapy as definitely as possible. It is hoped that physicians, whether they possess radium of their own or not, will not hesitate to inquire about points in technique. Furthermore, visitors are always welcome to inspect any part of the work which interests them.

It is not the purpose of this report to go into the technique of the application of radium. In the future, as data accumulates and definite conclusions can be reached in the light of carefully kept records, papers will be published, detailing technique and results in specific groups of cases. At present the number of cases treated during the year will be given, with a general statement of the results obtained in each group. Insufficient time has elapsed to attempt to classify the end results because the majority of these cases are of malignancy.

Basal Celled Epithelioma—91 cases. The results in this type of malignancy continue to be eminently satisfactory. Radium therapy is especially satisfactory in the more difficult cases, particularly in those located at the canthi or on the lids of the eyes. The very extensive and long standing cases of this variety of epithelioma can also usually be improved if not cured.

Squamous Celled Epithelioma (of the glabrous skin)—20 cases. The primary lesion can usually be healed at least temporarily if not too extensive or if it has not been previously treated. Metastases in these cases are frequent and the end result in a given case is therefore in doubt for some time after finishing radium treatment.

Carcinoma of the Lip—15 cases. These cases have only recently been submitted to radium therapy. So far the results have been very encouraging. Radium should be combined with surgery and X-ray in many of them in preventing and in treating cervical metastases.

Carcinoma of the Mouth (exclusive of carcinoma of the tongue)—25 cases. When the lesion is not too extensive, a marked improvement can be obtained in some of these cases. The technique of treating mouth cases is changing and with the availability of the emanation the results have been improved.

Carcinoma of the Tongue—17 cases. Most of these were advanced cases. In the earlier cases the healing of the tongue lesion is the rule and even in late cases judicious therapy often effected considerable palliation. The main problem is the handling of metastases.

Carcinoma of the Oesophagus—5 cases. Improvement can be obtained in nearly all of these cases by the combination of the X-ray and radium therapy. This improvement consists in temporary relief of dysphagia, pain and cough with gain in weight and strength.

Carcinoma of the Cervix—38 cases. Radium is of benefit in all but very extensive cases and recurrences. Post-operative radium therapy has been abandoned.

Lymphosarcoma—7 cases. Radium in these cases is superior to X-ray only when the tonsils are involved or the growth is of limited extent. Temporary relief is usual, though recurrences generally occur.

Sarcoma—16 cases. Rapidly growing sarcomata react quickly to radium therapy, but recurrence follows a brief period of quiescence in most of them.

Keloid—4 cases. All but long standing cases can be greatly benefited.

Keratosis of the Lip—8 cases. These are potential carcinomata and should be treated as very superficial malignancy. Radium has proven very satisfactory.

Lupus Erythematosus—10 cases. In the chronic discoid type of this disease radium is often of considerable benefit.

Lupus Vulgaris—5 cases. No other form of therapy surpasses radium in treating even extensive and long standing cases of this disease.

Vascular Nevus—19 cases. In the raised type a good cosmetic result is the rule, but in the flat port wine stain type a slight paling is all that can be hoped for.

Verrucæ—5 cases. In certain regions radium is the treatment of choice. This applies particularly to those near the finger nail and to verruca plantaris between the toes.

Grave's Disease—11 cases. The result is earlier and more marked than in any other form of therapy. Whether the effect is permanent or not cannot yet be stated. Radium is not suitable in treating toxic adenomas.

Incipient Cataracts—60 cases. A large percentage of these have been given improved vision. Radium is useless in mature cataracts.

Miscellaneous—56 cases. This includes the cases which do not fall into any of the above groups, and in which the treatment with radium has been more or less experimental.

Thus 420 cases of various types have been treated during the year and though many of them are of the most hopeless in the realm of medicine, the results have been encouraging. New fields are being opened to radiotherapy by changing methods and improvements in technique are leading to better results. The use of the emanation instead of radium element has proven eminently satisfactory. The advantages far outweigh the few disadvantages and make the use of emanation preferable.

Hotels as Doctors of Nutrition—Press dispatches are making much of the entrance of hotels, cafeterias, restaurants and similar places into the practice of medicine. The "scientific diet service" is now a feature of a number of prominent hotels. All one is required to do is to look down the special menu, pick out his own diagnosis and, presto, the proper diet for that disease is available! Some of the Eastern cities also now have "healtheterias," devoting themselves exclusively to the "scientific feeding of the undernourished" and those suffering from chronic diseases. Many of them are paying particular attention to the undernutrition of children as a specialty. Some of them advertise their expert medical advice in electric-light signs at night.

With the statistics by "food specialists" showing that the majority of our people, and particularly of our children, are undernourished and suffering from various grades of starvation, these scientific (?) nutrition institutes ought to do a flourishing business during the ephemeral existence of this particular and exceedingly foolish fad.

STRICTURE OF THE URETHRA IN WOMEN *

By WILLIAM E. STEVENS, M. D., San Francisco.
From the Urological Department of the Women's Clinic, Stanford University Medical Department, and the San Francisco Polyclinic.

Stricture of the urethra in women is a condition which is very often overlooked, although it may be responsible for marked functional and organic disturbances in the genito-urinary tract of this sex. While the kidneys, ureters and bladder are usually carefully investigated in the presence of symptoms referable to the genito-urinary tract, examination of the urethra is frequently omitted, and consequently pathological lesions of this important organ are neglected.

This is probably due to the generally accepted idea that strictures of the female urethra are very uncommon. While this is true so far as the lumen of the canal is concerned, strictures at the meatus on the other hand are frequently encountered.

Dilatation of the urethra has long been an empirical treatment for urinary disturbances and every urologist has noticed the marked symptomatic improvement that sometimes follows the single introduction of a cystoscope or ureteral catheter. Impressed by the frequency with which this occurred, I decided to examine the urethra more thoroughly, and consequently, in addition to endoscopy, have made it a practice to calibrate this organ in all women, as well as in men, who complain of urinary symptoms. Including strictures of the meatus, which are much more numerous than those in the lumen of the canal, the results were most interesting, the number far exceeding expectations.

In reviewing the literature, I found that many years ago, Skene, in his interesting book on "Diseases of the Bladder and Urethra in Women" said, "the form of stricture that will most often come under your consideration will be a contraction of the meatus urinarius, produced in many cases by too liberal use of caustics in the treatment of abnormal growths at the lower end of the urethra, or from vulvitis." The vulvitis to which he refers was probably gonorrheal in origin for, as we now know, the urethra is involved in almost all cases of this infection.

A few years later at the forty-first annual meeting of the American Medical Association, Van de Warker, in calling attention to strictures of the urethra in women said, "the form of stricture I have most frequently met with, and one that produces the most acute symptoms, is the annular stricture of the meatus." With the exception of the latter's paper in 1890, I have been able to find but one important contribution to this subject, that of Maurice Vilfroys in 1914, since it was first mentioned by Lisfranc about one hundred years ago.

Heinrichsdorff recently reported a case in which death occurred, following catheterization of the bladder in a woman sixty-five years of age who had complained of involuntary dribbling of urine

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* Read before the Fiftieth Annual Meeting of the Medical Society of the State of California, Coronado, May, 1921.

and difficult urination for one year. Necropsy revealed that the urethra in its proximal third was so constricted that only small sounds could be passed. The wall of the neck of the bladder was hard and much thickened. The bladder itself was extremely large, the wall was stiff, and in places a centimeter thick. In some places the bladder wall was thin and protruded outward. Both ureters were thick as a finger, tortuous and filled with a purulent fluid. The kidneys were enlarged and very soft, studded with small abscesses, very little normal tissue remaining. The condition was thus due to stenosis of the upper urethra, which had entailed retention and stagnation of urine and dilatation of the superior urinary passages, followed by their infection and a suppurative process throughout the kidneys.

Herman, of London, following the examination of fifty-five women without urinary symptoms, concluded that the normal size of the female urethra is F 29, a little less than ten millimeters. Van de Warker expressed the opinion that a urethra from F 23 to F 28 should be considered normal. Examination of 114 patients at the Stanford Women's Clinic disclosed the fact that only 18 or about 16 per cent had never suffered from symptoms referable to the urinary tract. Following urethral calibration in these eighteen cases, I found the average size of their urethra to be F 26 or a little less than nine millimeters. My opinion is that a urethra below this size is usually abnormal, and the response to treatment has justified this conclusion. In the series of pathological cases upon which my observations have been based, the average size of the stricture was F 22. The smallest would not admit a filiform.

The youngest patient was three, and the oldest sixty-nine years of age, the average being forty-four years.

My patients have been divided into three classes, prostitutes confined in a special ward at the San Francisco County Hospital, clinic patients seen at the Stanford Women's Clinic, Mount Zion Hospital Clinic and San Francisco Polyclinic and private patients. As practically all of the first class had at some time suffered from gonorrhea, the significance of this infection as a factor in the etiology of strictures could be determined. In fact, the meatal strictures occurring in prostitutes exceeded that found in clinic patients by eleven per cent, and in private patients by twenty per cent. It is, therefore, apparent that Neisser infection is the most important etiological factor in strictures occurring at or just within the meatus. Other causes of obstruction at this location are congenital malformation, contraction following the traumatism resulting from childbirth, ulceration, caustic applications and operative procedures. I have not been able to satisfy myself that focal infections, as suggested by Hunner, have any bearing upon the etiology of this condition. Strictures of the lumen of the canal, which are usually due to traumatism associated with childbirth, are as infrequent in prostitutes as in other classes of patients. This is to be expected, as the female urethra, with the exception of its few ducts and glands, is, like the membranous portion of the male urethra, lined with squamous epithelium, and consequently resistant to all forms of infection.

COMPLICATIONS

Hunner found urethral stricture in eighty-five per cent of his patients suffering from stricture of the ureter. From the fact that most of our cases cleared up under local treatment of the urethra, the conclusion is drawn that the majority of urethral strictures on the other hand, are not complicated by stricture of the ureter. A note should be made, however, of the fact that two of our youngest patients, girls eight years of age, suffered from both ureteral and urethral strictures.

The most frequent complications are urethritis and trigonitis, and one or both of these conditions were present in eighty-three per cent of the cases in this series. The fact has long been recognized that stricture or obstruction from any cause predisposes to infection higher up in the urinary tract. Pus was found in eighty-five per cent of the catheterized specimens of bladder urine in these cases.

SYMPTOMS

As the female bladder is especially sensitive to reflex influences, marked subjective symptoms are often produced by comparatively slight obstructions. It must be remembered, however, that these symptoms may be partly due to the accompanying urethritis or trigonitis.

Frequent urination is the most common symptom of which these patients complain. It was seldom absent, occurring in over eighty-five per cent of our clinic and private cases. Subjective symptomatology was not taken into consideration in the patients confined in the detention ward of the San Francisco Hospital, as many of these deny disability, hoping to be released as soon as possible.

Next to frequent urination, these patients most often complain of pain, which is referred to the urethral or bladder regions. This symptom occurred in sixty-four per cent of our cases. Burning or smarting was present in twenty-six per cent, urgency in five per cent, and difficulty, constant desire to urinate, partial incontinence, dribbling and retention of urine, were each present in two and a half per cent of our patients. Residual urine is seldom found except in the presence of very tight strictures.

DIAGNOSIS

The diagnosis of stricture is best made by means of the olive-tipped bougie. A urethrotome, or sound, is much less reliable, as strictures of the female urethra usually yield readily to slight pressure, and consequently higher readings result from use of the latter instruments.

TREATMENT

The majority of urethral strictures should be treated by means of gradual dilatation, absorption of the constricting exudate being best promoted by this procedure. In the presence of scar tissue, however, meatotomy, internal urethrotomy or external urethrotomy with resection of

this scar tissue is often indicated. Using the French scale of measurement, a straight sound of the same size as the stricture is introduced. The sounds are increased two numbers at each treatment until an F 30 passes without difficulty. Following the withdrawal of the sound a few cc. of one to three per cent silver nitrate solution are injected into the bladder and urethra. At first treatments are given twice a week, but the interval is gradually lengthened to once a month and then may be discontinued. Preceding dilatation the use of a local anæsthetic such as a ten per cent cocaine solution on a cotton-tipped applicator is sometimes advisable in nervous women.

The symptoms improve, as a rule, after two and disappear after five dilatations, recurrence being very unusual if treatment is not too abruptly discontinued.

The following brief case histories, two of stricture at the urethral meati, and the other of both the lumen of the canal and the meatus are typical of many which have come under my observation.

Case I.—Married woman, age fifty-two, housewife, nullipara, complains of frequent urination, that the urine escapes slowly and that dribbling is usually present. The symptoms began three months ago and are gradually increasing in severity. She denies Neisser infection and gives no history of previous genito-urinary symptoms. A catheterized specimen of bladder urine contains an occasional pus cell. The olive-tipped bougie encounters a stricture, F 20 in size, at the external urethral meatus. Following two treatments which consisted of dilatation with straight urethral sounds, followed by the instillation of one per cent silver nitrate solution the symptoms had markedly improved. The symptoms disappeared after the third treatment.

Case II.—Married woman, forty-five years of age, housewife, the mother of nine children, complains of burning in the urethra, worse at the beginning of urination, and nocturia. Her past history and family history are of no significance.

The present illness began shortly after her first confinement twenty-one years ago with burning, stabbing pain worse at the beginning of urination. She has had attacks of difficult urination, at which times the urine escaped drop by drop. The symptoms have been worse since her eighth confinement nine years ago. Ten months ago she suffered from retention of urine for three days. She was taken to the hospital, where a growth was removed from the meatus and the urethra dilated with sounds at intervals for one month. All symptoms except the burning sensation disappeared and she did not come to the clinic for further treatment as requested. Three days ago micturation again became difficult, the urine escaping in drops. She states that some relief was obtained in a few hours by the application of hot compresses to the vulva.

Examination disclosed a stricture just inside the meatus through which an F 12 glass catheter could be introduced with difficulty, and another stricture of slightly larger caliber in the posterior third of the urethra. Scar tissue resulting from childbirth was responsible for both strictures. Residual urine amounting to 60 cc. was present. Because of the nature of the obstruction, the small caliber of the strictures and the pain caused by instrumentation, meatotomy and internal urethrotomy were deemed advisable. All symptoms disappeared following these operations.

Case III.—Female child, three years of age, complains of frequent urination and pain in the region of the bladder of one month's duration.

A number five ureteral catheter was passed with difficulty because of a stricture at the external urethral meatus. The catheterized specimen of bladder urine contained a few pus cells. Culture showed non-hemolytic streptococci. The symptoms improved after the second and disappeared after the fourth dilatation of the urethra.

CONCLUSIONS

Stricture of the female urethra is relatively common, and consequently calibration of this organ should be a part of the urological examination of every woman and child complaining of symptoms referable to the genito-urinary tract.

Strictures of the female urethra respond readily to proper treatment, and their early detection will prevent pathological lesions of the upper urinary tract secondary to this condition.

(210 Post St.)

PRE-ATAXIC GASTRIC CRISES OF TABES *

By CLYDE FISHBAUGH, A. M., M. D., Los Angeles, Cal.

Because of the frequent mistakes in diagnoses and numerous unnecessary operations on patients with pre-ataxic gastric crises, it seems opportune to present this subject at this time. Neurologists are alive to the frequency of this condition and, doubtlessly, fail to recognize very few cases, but physicians and surgeons have all found early stomach crises an easy pitfall.

Nuzum,[1] in a review of one thousand patients at the Cook County Hospital, Chicago, noted that visceral crises of tabes was observed in 22 per cent of the cases. Of the 22 per cent, 19 per cent were of the gastric type, 2 per cent renal, and 1 per cent intestinal. Erb[2] found visceral crises ten times in 400 cases, and Fournier,[3] fifteen times in 210 cases.

In reports of these large groups of cases, the pre-ataxic have not been differentiated from the ataxic form. It is the purpose of this communication to consider only that form of gastric crises noted in pre-ataxic patients. The diagnosis is easy in ataxic patients, as other features of tabes are in evidence. The frequency of incorrect diagnosis of gastric crises in all stages of tabes is emphasized by Nuzum,[1] who observed that 87 per cent of the 220 patients had been operated upon unnecessarily. Of this number, eighteen were operated upon for gastric ulcer, sixteen for gall stones or cholecystitis, seventeen for appendicitis, eleven for prostatitis, six for renal colic, five for post-operative adhesions, one each for cauda equina, meningocele, ectopic gestation, peritonitis, and nine operations were exploratory.

The following cases illustrate the great diversity of symptoms, findings and diagnoses encountered in the study of this manifestation of spinal syphilis.

Case No. 1.—An actor, 38 years old, complaining of stomach trouble. About fifteen years ago the patient began to have very severe, dull, heavy pain in the abdomen. Pain would come on during

* Read before the Fiftieth Annual Meeting of the Medical Society of the State of California, Coronado, May, 1921.

on right after a meal, and was not accompanied by nausea or vomiting. The attacks would last from one-half to one hour and then gradually wear away. There has never been any special soreness in his abdomen. Occasionally he would be completely free of symptoms two or three years. All of a sudden the trouble would return and the attacks would continue daily for three, four or five years. The last series of attacks started two years ago. Pain frequent after dinner; rare after breakfast or luncheon. Pain has been so severe at times that he has required an opiate for relief. He has never awakened in the night with pain. Recently has vomited food eaten a short time before, but vomitus contained no blood.

Complains of slight dryness in his nose, and at times a slight hacking cough. The appetite has been poor for five or six years. Bowels usually constipated. Has been married thirteen years. Wife in good health; no pregnancies. There is history of a chancre seventeen years ago, followed two or three months later by a rash and ulcers in his mouth. Following the rash the skin pealed off the palms and the soles. He was treated with mercury and iodide for about one year. His weight was 154 in 1900, and is now 127 pounds.

Physical Examination.—Rather poorly nourished man; pupils slightly irregular, react slowly to light, but actively to accommodation. The palpable lymphatics are small and shotty. No abnormalities found in special examination or laboratory tests of the heart, lungs, abdomen, rectum, tonsory system, urine, blood, feces or reflexes.

The Wassermann reaction was negative from the blood, but very strongly positive from the spinal fluid.

Case II.—Moving picture actor, age 38, weighing 252 pounds, complains of pain in the pit of the stomach and vomiting. About fifteen years ago he had severe gripping pain in the pit of his stomach, which came on suddenly and was continuous for two weeks. There was no nausea or vomiting. There was soreness on pressure. Since that time the patient has had repeated attacks of similar nature lasting ten to fourteen days. There have been intervals of several months' freedom between attacks on numerous occasions. He had been free from attacks for two years until three days ago, when he had an exceedingly severe pain, not relieved by food. He has vomited green, sour chyme many times daily since the onset. Black stools have not been noticed, and sodium bicarbonate causes him to belch, but does not relieve the pain. He has awakened at night with the pain. Bowels are regular.

The patient has been married for eight years. Wife is living and well, and has not been pregnant.

Physical Examination.—The pupils are slightly irregular in outline, but reacted sluggishly to light and actively to accommodation. There is a rather marked tenderness three or four inches above the umbilicus in the median line. The knee kicks are rather sluggish. Rhomberg negative. No abnormalities are found by physical examination or laboratory tests of the sensory system, gastro intestinal, or urine. Wassermann reaction of blood showed a single plus and the spinal fluid gave a four plus.

Case III.—Mechanic, age 34, complains of pain in the abdomen, nausea and vomiting. The patient was perfectly well and strong until six years ago, when after having a bowel movement, was taken with very severe pain in the upper part of his abdomen, followed by nausea and vomiting. A physician was called, who stated that he was having an attack of gall stones. The following day operation was performed, but no gall stones found. Shortly after his return from the hospital he had another attack similar to the one above described. The patient has always associated these attacks with overeating or too much laxative. The attacks last for a day or two and are followed by a few days of rest. Another physician diagnosed his condition as chronic appendicitis. The appendix was removed, but the attacks continued to occur as frequently as previously. Some years later a surgeon performed an exploratory coelectomy, but found nothing wrong. Since the last operation, has had attacks at varying intervals, from a few days to a few weeks. For the last two weeks the attacks have been of daily occurrence, usually coming in the after part of the day, so severe that morphine was necessary for relief. The pain starts in the pit of the stomach, and is soon followed by violent vomiting which continues until relieved by an opiate. At times he has vomited black blood, but has never had black stools. Following the first operation, the patient was given some medicine by mouth for the pain. After taking it a short time he noted that his pupils were dilated, one of which never contracted to normal. The left has remained somewhat larger than the right.

The patient has been married for three months. He had gonorrhoea fifteen years ago which was cured in a week's time. He gives a negative history of syphylis.

Physical Examination.—Fairly well nourished man, about twenty pounds under weight. The pupils are irregular in size and shape. Both react slightly to light and promptly to accommodation; eyegrounds were negative. There is slight tenderness in the epigastrium, otherwise the abdomen is negative. Rhomberg sign is negative; patient reflex positive on re-enforcement; urine, negative; blood, negative; stool, normal; Rehfuss test breakfast, normal; X-ray examination said to be normal; and sensory examination normal; Wassermann test, blood one plus. Spinal fluid four plus.

Case IV.—Man, age 42, complains of pain in the stomach and vomiting. Four years ago patient suffered from exceedingly severe pain in the pit of the stomach, shooting upwards to the shoulder. The pain did not radiate to the back. At the onset, vomited bile with each attack of pain. The first attack lasted one month or so. He felt good for two or three months and then had another attack. The pain came without any apparent warning and left rather suddenly. Vomiting was followed by slight, temporary relief. Food did not relieve the pain. While being observed in a hospital, he vomited blood repeatedly and on October 22, 1916, gastro enterostomy was performed for a mistaken diagnosis of ulcer of the stomach. Soon after leaving the hospital he had another attack. One year later the patient consulted another surgeon, who removed the gall bladder and later the appendix with no apparent benefit. The patient returned to work and would work a month or so and then be compelled to stop for a few weeks because of an attack. The last attack started three weeks ago. He has very severe pain in the abdomen, chest and across the shoulder blade. Anything he eats is vomited in ten or fifteen minutes, bitter and yellow. He has soreness in his abdomen. The pain is a sharp, gnawing pain, never stopping. Massage of the stomach gives no relief. Baking soda affords some relief. Bowels have always been regular.

The patient has a wife and four children, all living and well. Syphilis and gonorrhoea are denied, and the wife has had no miscarriages.

Physical Examination.—The patient is fourteen pounds under weight. The pupils are slightly irregular and react sluggishly to light, but actively to distance. There is slight tenderness over the entire abdomen, more marked in the epigastrium. The knee kicks are obtained on re-enforcement; Rhomberg reflex, normal; sensory examination, negative; blood count, normal; and urine, normal. The Ewald test breakfast shows free hydrochloric acid 16 and a total acidity of 28 per cent; no occult blood, but bile positive. The X-ray exami-

nation, by a very competent roentgenologist, reveals no stomach abnormality. The Wassermann test from blood one plus; from spinal fluid four plus.

SUMMARY

These patients presented many similar features, which were helpful in diagnosis.

1. Weakly positive Wassermann in blood, but strongly positive in the spinal fluid.
2. Irregular pupils.
3. Reaction of pupils to light sluggish, reaction to accommodation normal.
4. Normal or sluggish knee kicks. Rhomberg and sensory examinations negative.
5. Sudden onset and sudden relief from attacks, without apparent cause.
6. Violent pains without food or alkali relief.
7. Severe vomiting during paroxysms with occasional hematemesis.
8. Absence of fever during attacks.
9. Normal urine, blood, test breakfast, and gastro-intestinal X-ray examinations.

Gastric crises are often the first symptoms of locomotor ataxia and may remain so for years. Two of these cases had had definite stomach crises for fifteen years, one for six years and the other for four years, and none had shown ataxic signs.

Charco, in his classic description of tabes in 1868, recognized the diagnostic pitfalls of this manifestation of syphylis when he said, "but of all the visceral symptoms, one which is most remarkable and the least known, if I mistake not, is that which I have proposed to designate by the name of gastric crises."

In conclusion it should be emphasized, that until the symptoms of gastric crises is kept constantly in mind, and until the Wassermann test becomes routine in chronic abdominal complaints, spinal syphylis will continue to be mistaken for real abdominal pathology.

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GASTROENTEROPTOSIS.*

By HENRY L. HAYES, P. A. Surgeon (R),
Gastroenterologist, U. S. P. H. S. Hospital No. 21,
Palo Alto, California.

DEFINITION—Gastroptosis, which in its strict and narrow conception indicates ptosis of the stomach, was first described by Glenard, and we are indebted to him for the introduction of the term to medical nomenclature. The condition of ptosis of the stomach alone, however, occurs so infrequently and is so commonly associated with ptosis of the other abdominal organs that the more comprehensive term of Gastroenteroptosis has superseded the more restricted term. Prolapse of the kidneys, intestines, colon, spleen, liver, etc., are indicated by the terms nephroptosis, enteroptosis, coloptosis, splenoptosis, hepatoptosis, etc., but, like prolapse of the stomach, they occur singly so infrequently that it seems wiser to discard this cumbersome and unnecessary multiplication of terms and adopt the all-embracing term of Gastroenteroptosis.

ETIOLOGY—Prolapse of the abdominal organs is frequently met with in patients who consult the physician for some gastric disturbance and who attribute their symptoms to some organic or functional disease of the stomach. The diagnosis made by the patient is frequently "dyspepsia," "gastritis" or "gastric ulcer," and it is only when such patients are subjected to more careful observation and study that the true condition is revealed.

Etiologically two different forms of gastroenteroptosis are found, the first being acquired and the second inherited. The first type is found as a result of mechanical causes, chief of which are improper dress in women, traumatism and frequent child-bearing followed by improper post-partum care. One of the most frequent and potent causes is lowering of the intra-abdominal pressure from the emptying of the uterus, the removal of large abdominal tumors or cysts and the draining of ascitic fluid. To these factors in the lowering of the intra-abdominal pressure may be added loss of weight, and particularly loss of omental fat, which frequently follows wasting disease, and by which the natural fat cushion which bolsters up the viscera and aids in maintaining the intra-abdominal pressure is lost.

The inherited or constitutional form of gastroenteroptosis has been especially brought to the attention of the medical profession by the researches of Stiller. According to this investigator 90 per cent of the cases of prolapse of the abdominal organs owe their abnormality to a distinct form of physical conformation which he designates as the "habitus enteroptoticus." Patients exhibiting the "habitus enteroptoticus" and suffering from the weakness and malpositions of the abdominal organs which accompany it are apt to develop into neurasthenics.

The attitude of the patient is probably the first thing that will attract the attention of the physician in those showing the characteristic "habitus enteroptoticus." Such patients do not stand erect, but slump down in a characteristic attitude, —stooped shoulders, retraction of the epigastrium

* Read before the San Bernardino County Medical Society at Arrowhead Springs, California, April 5, 1921.

and protuberance of the hypogastrium, forming the so-called "pot belly." Such patients will usually exhibit a general lack of muscle tone; they are weak and have long, narrow chests with a rather acute costal angle. Frequently, also, they will show a floating tenth rib (Stiller's sign). This is the type of patients in whom we are accustomed to look for floating or prolapsed kidney, and the finding of this stigmata, combined with a low-hanging stomach, is almost pathognomonic of gastroenteroptosis.

Associated with prolapse of the stomach and intestines we almost always find gastric and intestinal atony, defective or irregular gastric secretion and nervous dyspepsia. These three disorders may differ in degree and in their relative severity; at one time the symptoms of the prolapse will predominate; at another time the gastric secretion will be at fault; and again the outstanding symptom will be the nervous dyspepsia.

Pathology—By the term gastroptosis we do not imply a prolapse of the entire stomach. Owing to the attachment of the stomach at the cardia it is impossible for the entire organ to descend. What is meant by the term is a prolapse of the pyloric end of the stomach which implies a stretching, or downward drag, of the organ, forming the so-called "water trap" stomach. The causes leading to this descent of the stomach and intestine is probably a stretching or relaxation of the mesentery and ligaments due to deficient muscle tone which is inherent in the "habitus enteroptoticus" and also to the disturbance of the equilibrium of the intra-abdominal pressure due to the loss of mesenteric fat, the emptying of a gravid uterus or the draining of ascitic fluid.

In any marked ptosis of the stomach the duodenum, in whole or in part, is dragged down with it, and the entire large intestine is pushed down by the descending stomach. The mesentery stretches easily to meet this condition. Only at the hepatic and splenic flexures of the colon do the mesenteric supports rigidly hold the organ in place, and as a consequence a sharp angulation of the gut occurs at both of these points. Not infrequently, however, a downward displacement of the liver will occur in connection with the ptosis of the other abdominal organs, and in such cases marked angulation of the colon at the hepatic flexure will not be found. The hepatic flexure is normally somewhat obtuse, and the angulation at this point caused by prolapse of the colon is rarely marked. The splenic flexure, on the other hand, is normally acute, and when accentuated by prolapse of the transverse portion of the colon may produce a condition approximating stenosis. This produces a mechanical obstruction to the passage of the intestinal contents, and, in connection with the atonic condition of the stomach and intestines inherent in the "habitus enteroptoticus," leads to an obstinate obstipation, which is characteristic of gastroenteroptosis. Because of the festoon-like position of the transverse colon the contents of the colon have to be propelled "up hill," so to speak, to encounter the obstruction offered by the sharp angulation of the splenic flexure, and the atonic musculature of the bowel is unequal to the task of propelling the fecal contents past the obstruction.

The transverse colon is the portion of the intestine most frequent, and most markedly, involved in prolapse of the stomach, though the entire gut is usually pushed downward by the weight of the superimposed organs and the weakening of the mesenteric supports. Any material degree of gastroptosis will produce coloptosis and enteroptosis. In women it is not unusual to find prolapse of the uterus and ovaries associated with prolapse of the stomach and intestines, since the same causes operate in one case as in the other.

Incidence, Age and Sex—Kemp, in his work on Diseases of the Stomach, Intestines and Pancreas, quotes Meynert as having found in fifty girls, twelve years of age, 50 per cent with gastroptosis, while 80 per cent of all the women in his gynecologic clinic were said to present this condition. The percentage of cases occurring among male adults he places at five. Kemp says, further, that from a study of various statistics it may be estimated that from 20 to 25 per cent of women complaining of gastric disturbances will be found to have movable kidney and enteroptisis, and that unquestionably the percentage of cases of gastroptosis among all women, including those who complain of no symptoms whatever, will average at least 15 per cent in our city populations. The percentage of cases of enteroptisis and nephroptosis among males complaining of gastric symptoms Kemp places at about two or three. He finds the ratio of men to women to be as 1 to 8 or 10. Glenard finds a higher percentage in both men and women, and his figures for incidence in both sexes is 30 per cent and 70 per cent, respectively, for men and women, the ratio between the two being 3 to 7.

The age at which the syndrome is most frequently noted is between 18 and 40, though, as Meynert has stated, he has found the condition in 50 per cent of girls 12 years of age. Between 50 and 60 years of age the symptoms of the condition are more manifest than at an earlier age, as would naturally be expected in view of the decreased muscular tonus of the abdominal walls which accompanies advancing age.

Subjective Symptoms—The subjective symptoms of gastroenteroptosis are generally those of neurasthenia plus those of gastro-intestinal disturbance. At times there may be a total lack of symptoms and the condition is discovered by accident or in the course of an examination for some other condition. When symptoms exist they may be referable to the stomach, intestine, gall bladder, kidneys or appendix. The symptoms may vary in degree from slight discomfort to the severe type described by Glenard. The picture given by Kemp of the gastroenteroptotic patient is as follows: "Some patients have the symptom complex of hyperchlorhydria, while others complain of belching and discomfort immediately after meals. There is usually marked and obstinate constipation; rarely diarrhoea. At times intestinal catarrh or mucous colic is noted, and flatulence is often complained of. The patients may suffer from headache, are frequently nervous and hys-

teric, almost always neurasthenic, irritable and mentally depressed. There is often a feeling of weight or bearing down in the abdomen which is relieved by proper support. In women menstrual disorders are frequent and dysmenorrhoea is often present."

According to Aaron, patients with the "habitus enteroptoticus," which has developed into pronounced gastroenteroptosis, may not experience any troublesome symptoms whatever from their misplaced organs. The same may be said of those whose prolapsed abdominal organs are the result of purely mechanical processes, and many patients with gastro-enteroptosis have been relieved of their distressing symptoms without the correction of their anatomic displacements. From these facts it may be inferred that gastroenteroptosis alone, in many cases, is not responsible for the invalidism of the patients, but that the cause must be sought for in the triple symptom complex of gastroenteroptosis, atony of the gastro-intestinal tract and neurasthenia. As Aaron very tersely expresses it: "The constitutional neurasthenia of enteroptotics is responsible for a great many of the subjective symptoms ascribed to gastroenteroptosis itself. The displacement merely aggravates the neurasthenic effects, or perhaps in some instances initiates them by the continuous traction of the displaced viscera on the mesenteries, thus placing the abdominal sympathetic nervous system in a condition of continued reflex irritation."

The general weakened muscular tone of the patient suffering from gastroenteroptosis manifests itself especially in the gastro-intestinal tract, and as a result we have atony of the stomach and intestines. This condition, with the concomitant neurasthenia, induces such symptoms of nervous dyspepsia as pressure, fullness, nausea, belching, burning sensation in the stomach, hyperacidity, vague discomfort after eating and occasionally pain in the epigastric region. Accompanying these symptoms there may be a variety of nervous manifestations, such as lassitude, dull headache, inability to work or to concentrate, irritability, mental depression and general weakness. As a rule the appetite is poor, though occasionally it may be normal or, more rarely, voracious. A frequent symptom, especially in women, is backache, which, in their case, may be due to prolapse of the uterus or ovaries which so often accompany descent of the abdominal organs.

Objective Symptoms—Patients with the "habitus enteroptoticus" present a characteristic appearance. As a rule they are tall and thin, or of slight stature, with long arms, thin neck, narrow thorax with acute costal angle. They stand in a slouching position, with sloping shoulders, retraction of the epigastric region and a protuberant abdomen,—the so-called "pot belly." The bony structure is slight, the muscles weak, there is a marked diminution of adipose tissue and there is a predisposition to lordosis and flat-foot. Stiller gives as one of the stigmata of the "habitus enteroptoticus" a floating tenth rib. These patients often suffer from anaemia, look pale and give the impression of being ill.

The X-ray affords very valuable aid in the diagnosis of gastroenteroptosis. The ptosed stomach is seen to be elongated, of the fish-hook or water-trap form, with the upper border below the level of the umbilicus. An abnormally low position of the greater curvature of the stomach cannot be taken as evidence of ptosis, as this occurs in dilatation of the stomach as well as in ptosis of that organ. To constitute prolapse of the stomach there must be a descent of the lesser curvature as well as of the greater. Associated with the characteristic elongated form and low-hanging position of the stomach the X-ray will also frequently show a sluggish motility and inefficient peristaltic waves. The gastric atony thus shown by X-ray examination need not necessarily result in gastric retention, as evidenced by the presence of barium in the stomach after six hours, for the gastric atony may be compensated for by a relaxed pylorus and the stomach may empty itself in normal time despite the deficient motility.

In order to demonstrate the co-existence of coloptosis or enteroptosis with the gastroptosis it is advisable to administer a barium enema and examine the patient in the standing position, or, if the enema is not feasible, almost equally good results may be obtained by an X-ray examination of the patient in the standing position twenty-four hours after the administration of the barium meal. The transverse colon will then usually be found to form a low-hanging loop, or festoon, between the hepatic and splenic flexures, the lower portion often lying on the floor of the pelvis.

Diagnosis—The diagnosis of gastroenteroptosis is made on the history of the case, the gastric symptoms, the existence of a neurasthenic state, the "habitus enteroptoticus" and the X-ray findings. This symptom complex presents a picture which cannot easily be mistaken, yet it is no uncommon thing to find these patients being treated for gastric ulcer, gastritis, neurasthenia or constipation, without considering the syndrome as a whole. The diagnosis may safely be made on two physical findings alone, viz: a ptosed or movable right kidney and prolapse of the lesser curvature of the stomach below the level of the umbilicus. These two symptoms, when found in conjunction, may be said to be pathognomonic of gastroenteroptosis, though an X-ray examination of the entire gastro-intestinal tract should be made for the purpose of confirmation. I do not consider a gastric analysis essential for the diagnosis of gastroenteroptosis, as the findings are too variable to be of value. The secretion may be normal, hyperacid or hypoacid, and this variation may be found in the same individual at successive examinations.

Prognosis—The prognosis for total and permanent replacement of the prolapsed organs is not good. If the condition has existed for some time the ligaments and mesenteries will have become stretched, and it is impossible to restore them to their normal condition. It is possible, in some instances, to lessen the degree of the prolapse, but total replacement cannot be looked for. As has already been stated, however, the distressing symptoms which mark this symptom complex cannot

be attributed to the prolapse of the stomach and intestines alone, but have their origin in the general state of the patient, and it is possible to so improve this that the symptoms will wholly disappear, or be greatly ameliorated, and the patient enabled to live out the remainder of his life in comparative comfort. As Aaron has so aptly said: "We cannot give these patients normal mesenteries, but we may give them normal function."

Prophylaxis—The early recognition of the "habitus enteroptoticus" in young subjects should be sought by noting their peculiar physique and tendency to gastric disorders. In such patients marked departure from the normal and the development of pronounced gastroenteroptosis may be prevented by early and judicious hygienic and dietetic treatment.

In the case of parturient women with a tendency to gastroenteroptosis, rest in bed for a suitable time after confinement should be insisted upon, together with proper bandaging and the strengthening of the abdominal muscles by exercise and massage. Remembering that one of the most potent causes of gastroenteroptosis in those predisposed to the condition is the sudden letting down of the intra-abdominal pressure the importance of these precautions will be apparent. By the application of these prophylactic measures the undue relaxation of the abdominal walls incident to childbirth may be obviated and the necessary intra-abdominal pressure preserved. The same precautions should be observed in tapping the abdomen in cases of ascites and the removal of large abdominal tumors.

Treatment—The treatment of gastroenteroptosis, after the condition has been fully established, resolves itself into medicinal, dietetic, hydro- and physio-therapeutic, suggestive and mechanical. All other methods should be tried before recourse is had to mechanical measures, which at best afford merely an artificial support, or "crutch," to the weakened abdominal walls. These are sometimes justified and necessary, however, when other curative measures have failed or appear hopeless, and consist of some form of abdominal bandage which will raise the prolapsed viscera to a more normal position, prevent their further descent and maintain the intra-abdominal pressure.

Medicinal treatment consists in the administration of drugs which will improve the muscular tone of the stomach and intestines, overcome the atony of these structures, relieve the marked obstipation, promote the appetite, aid in the assimilation of food, relieve the neurasthenic state, assure sufficient sleep and build up the general well-being of the patient.

Hydro-therapeutics and physio-therapeutics should be of such a nature as will stimulate the muscle tone of the patient rather than depress it. Such measures are the alternating hot and cold shower, the needle spray, the Scotch douche, the use of the high frequency electric current and massage. Cabinet baths and hot tub baths are debilitating and should be avoided.

Since in gastroenteroptosis there is always a loss of adipose tissue and especially of the intra-abdominal fat, one of the first aims of the physician in treating this condition should be to increase the weight of the patient. The dietetic treatment of these cases has for its object the restoration of the patient to his normal, or supra-normal, weight and the improvement of the general nutrition in order to overcome the neurasthenic state, to strengthen the muscles of the abdominal wall and bring about the re-establishment of the intra-abdominal pressure. The diet should be as nutritious as possible, should be easily assimilated and should contain a large amount of fat. Milk, cream and butter are among the most suitable articles of diet, though the menu must be governed entirely by the requirements of the individual case, and the motor and secretory powers of the stomach and intestines must be given due consideration in prescribing the diet. These patients are always underweight, and it may be necessary to place them upon a rest-and-fattening cure in order to bring them back to, or above, the normal weight. It has been found that neurasthenics and patients with gastroenteroptosis do better when the adipose tissue has been restored or brought above normal, and the hyper-alimentation treatment has the two-fold purpose of relieving the neurasthenic state and replacing the intra-abdominal pressure by the deposition of fat in the omentum. In connection with the rest-and-fattening cure it is advisable to elevate the foot of the bed or to place a pillow beneath the buttocks in order to favor the upward return of the viscera by gravitation. With the same object in view it is well, also, to have the patient assume the knee-chest position for brief periods several times a day.

Since the abdominal muscles play so important a part in the maintenance of the intra-abdominal pressure by which the abdominal organs are retained in position, and since these muscles are always flabby in the "habitus enteroptoticus," it is necessary to employ measures to restore their tone. One of the best means for the accomplishment of this end is systematic abdominal gymnastics, and patients should be instructed in these procedures and required to practice them religiously.

The gastroenteroptotic patient is often a neurasthenic and usually mentally depressed, and in order to obtain the best results he should be placed in cheerful surroundings, with normal cheerful companionship and mental and physical relaxation. Association with other invalids should be avoided, and the patient encouraged to indulge in mild out-door sports. New interests, new surroundings, perhaps new friends, when combined with proper rest, food, hygiene and exercise will go far to stabilize the nervous system, promote appetite and restore the normal muscle tone, and when these goals have been achieved the patient will be well on the road to recovery from the distressing subjective symptoms, if not from the pathological displacements, of gastroenteroptosis.

THE AMOEBA AS THE CAUSE OF THE SECOND GREAT TYPE OF CHRONIC ARTHRITIS

Preliminary Note

By LEONARD W. ELY, M. D.,
Associate Professor of Surgery, San Francisco,

ALFRED C. REED, M. D.,
Assistant Clinical Professor of Medicine, San Francisco,

And

HARRY A. WYCKOFF, M. D.,
Clinical Pathologist,
Stanford University Medical School, San Francisco.

By the second great type of arthritis we mean that form of arthritis hitherto described by the Germans as arthritis deformans, by the English as osteoarthritis, by Goldthwait as hypertrophic arthritis, by Nichols and Richardson as degenerative arthritis, and by other writers under various titles. This is the senile form of arthritis, the chronic rheumatism of the elderly. For want of a better name some writers have called it metabolic arthritis, a singularly unfortunate and quite meaningless term.

In previous papers[1] Ely has set forth the pathology at length, emphasizing the fact that the primary change is a necrosis in the bone marrow in the region of the joint, and that all subsequent changes in the bone and in the cartilage are the result of this necrosis. All efforts to find the cause of the necrosis have been in vain. Everything in the bone indicated that the changes are caused by some form of organism, which killed by shutting off the blood supply, but all attempts to find the organism have been fruitless. We had been searching for a bacterium, in spite of the fact that the pathological anatomy of this disease, both gross and histologic, was absolutely different from that of the arthritides caused by bacteria, e. g., the tubercle bacillus, the treponema pallidum, the diplostreptococcus, etc. Ely has repeatedly called attention to the presence of infection about the roots of the teeth in patients with this type of arthritis.

Some months ago the conception of the relationship of amœba to this problem was suggested by Doctor J. V. Barrow, of Los Angeles, who had been working with Professor C. A. Kofoid, and who had found the amœba histolytica (sive dysenteriæ) in the stools of one of Ely's patients. Since then we have pursued this line of investigation in the Stanford Medical School and are conducting the work as a joint research. A full report of our investigations will be published at a later date. Doctor J. A. Campbell of the Dental Department of the Stanford Clinic has rendered valued assistance.

Paraffin sections of the bone in the region of necrotic areas from this type of arthritis were cut 4 to 8 microns thick. Stained by the standard iron hæmatoxylin method, the sections showed organisms identified as endamœba histolytica. These organisms were abundant in the region of necrotic areas in the marrow, but not actually in the necrotic areas. They were especially abundant in the immediate vicinity of the capillaries. Photomicrographs will appear in a later communication. We appreciate that we are but on the threshold of the problem, and this progress note is published to stimulate criticism and promote further research. It is only proper to state that our findings lack unanimous confirmation.

We ask for material removed at operation upon patients with this type of arthritis. It should be placed immediately in Schaudinn's solution at a temperature of 50° C., and may be mailed to us in a sealed container.

[1] Ely, Leonard W. The Great Second Type of Chronic Arthritis—Further Studies. California State J. of Med., 1921, v. XIX, 415.

ON THE OCCURRENCE OF ENDAMOEBA DYSENTERIAE IN BONE LESIONS IN ARTHRITIS DEFORMANS

By CHARLES A. KOFOID, Ph. D., Sc. D.,

And

OLIVE SWEZY, Ph. D.

Contribution from the Zoological Laboratory, University of California, and the Division of Parasitology, Bureau of Communicable Diseases, California State Board of Health, Berkeley, California.

A portion of the head of a human femur removed by operation in a case of arthritis deformans, fixed in formalin, decalcified and sectioned by Dr. Leonard W. Ely and stained in iron hæmatoxylin and examined in the zoological laboratory at the University of California, reveals a pure infection of amœbæ about the characteristic lesions in the bone. No stained bacteria have been found in our examination. The amœbæ are somewhat localized about the centers of necrosis near the articular surface. They are more abundant around the capillaries in the peripheral zone around the lesions. The organisms interpreted by us as amœbæ are unlike known normal or pathological tissue cells. They have the characteristic nuclear structure or *Endamœba hysenteriæ* Councilman and Lafleur, found in tissues about amœbic ulcers in intestinal amœbiasis. Their nuclei are unlike those of *Endamœba gingivalis* found in gingival abscesses and in granulomas of extracted teeth. Their nuclei are unlike the characteristic nuclei of other known parasitic amœbæ of man, and unlike those of normal and pathological tissue cells as figured in standard treatises and found by us in available preparations of human bone and bone marrow. The stained amœbæ show many instances of characteristic amœboid pseudopodia. Their distribution is unlike that of any known tissue element.

In the interest of further investigation, it is desirable that stool examinations for amœbæ be made in cases of arthritis deformans. Stools for such examinations may be sent for three to six successive days in legal mailing cases only, or by prepaid express to the Division of Parasitology, State Hygienic Laboratory, Berkeley, California, for examination by the writers.

FALLACY OF THE USUAL TESTS FOR SWIMMING POOLS

By J. W. ROBINSON, M. D., Deputy Health Officer, Los Angeles County

Public health officials should realize their responsibilities in the proper sanitary control of swimming pools, because of their importance in the spread of communicable diseases, particularly in infections of the eye, ear, nose and throat. This is distinctly a medical and not an engineering problem. Engineers have done commendable work in building and supervising swimming pools, but without comprehensive knowledge of medicine, including bacteriology and sanitation, they have not appreciated the dangers of this form of infection. The tests usually applied to protect the public, while good, do not go far enough. Swimming pool infections of the eye, ear, nose and throat are not only dangerous, but difficult to prevent. Mucous or pus containing hemolytic streptococci, pneumococci or other infective organisms are separated from the swimmer by direct washing, coughing, sneezing, blowing the nose or expectorating, and floats upon the surface of the water. It is then easy for some of this infective material to get into the eye, ear, nose or throat of other bathers.

The usual methods of testing water fail to show this danger and lead to false security. I am convinced that many of the "colds caught" by the people while in the swimming pool are actually swimming pool infections. The literature contains many somewhat casual references to the dangers of swimming pools. Harrington & Richardson's "Practical Hygiene" merely mentions it. McNutt, in "Manual for Health Officers," says: "Swimming pools have been suspected of transmitting eye affections, typhoid and other diseases." Rosenau, in "Preventive Medicine and Hygiene," states that "The diseases contracted in swimming pools are inflammatory infection of the upper respiratory tract and conjunctiva and injury and inflammation of the ears."

In an excellent article by Simons (American Journal of Public Health, March, 1921), regulations prohibiting expectorating are provided, but the subject of infection is casually treated. The outlet for water mentioned in this article is not in a proper place, as I shall show later.

In their rules for sanitation and safety of swimming pools, adopted December 4, 1920 ("Special Bulletin No. 38"), the California State Board of Health have, to a considerable extent, recognized these dangers and have taken steps to correct them, but not nearly as fully as is desirable. Rule 3 states: "Facilities for adequately protecting the pool waters against unnecessary sputum contamination by bathers must be provided. In order to keep the surface of a swimming pool reasonably free from sputum and objectionable miscellaneous floating contamination, it is necessary to provide both convenient and proper places for expectoration by bathers, and means for frequently or continuously skimming off the surface water. The device used in practically all up-to-date swimming pools to meet this requirement is the combined overflow and expectoration gutter, extending completely around the pool." In Rule 2, they mention the desirability of having the water flow into and out of the pool at various levels. Rule 4 states: "All persons known to be or suspected of being afflicted with infectious diseases shall be excluded from the pool." This is very good, but who is going to determine whether or not bathers are infected? When they enter pools in large numbers, in a short time even a trained observer could not possibly locate cases of a communicable nature. So, for safety sake and practical results, one must consider that a certain percentage of all people who enter a swimming pool are carrying communicable infections, and adequate provisions must be made to protect the other bathers.

As in many other conditions, it is easier to point out an evil than to correct it. A practical solution can only result from intelligent discussion by a number of people looking at it from different angles. The California State Board of Health rules are in the right direction, but they are not specific enough. As a practicable contribution to this subject, I would suggest:

First—In order to prevent stagnation of waters in corners, except what is overcome by the movement of bathers, the location of supply and drainage pipes should be specifically stated by Boards of Health or of Engineering.

Second—In addition to rules concerning clearness and bacterial counts, there should be a rule stating the frequency with which water should be changed, on a basis of a certain number of cubic feet to each bather, or in ratio of the surface area per bather. There should be a constant flow of water from the surface into the overflow gutters, and this water should be supplied by as many intake pipes and removed by as many overflow pipes as is necessary to keep all parts of the surface of the water changed. To accomplish this satisfactorily, the flow of water should be across, and not lengthwise of the pool, in order that mucous floating on the surface would be there the minimum amount of time.

Third—Methods should be worked out of skimming the surface of the water to examine for pus or other infectuous material.

Fourth—A law should be enacted making it a misdemeanor for an infected person to enter a swimming pool.

Adrenalin—Up to 1900 the medical profession had to be content with extracts and other preparations of the suprarenal gland that contained, besides what was wanted, a good deal of inert and possibly irritating material.

One manufacturing house, at least, was engaged in making a discovery—the isolation of the active principle of the suprarenal gland, or, if it is not quite accurate to speak of it as "the active principle," the pressor or blood-pressure-raising principle of the gland. For it was known that such a principle was contained somewhere in the gland substance, from the observed effect of aqueous solutions of suprarenal extracts; and it was this principle in pure form that was wanted.

Adrenalin, the pressor principle sought, has been in use by the profession since 1901. The manufacturers of adrenalin carry an advertisement in this Journal.

EDITORIALS

A PROBLEM IN MEDICAL ECONOMICS

Modern business co-ordinates the facilities and resources necessary to produce a given result. This requires the harmonious blending and utilization of specialists in direct and collateral lines—organization. Similar policies prevail in some of the professions. It is not usual to see a successful attorney constituting a unit of service. Why? Simply because it is better business for the lawyer and better business for clients for several men, specialists in the various branches of the law, to associate themselves together. Progress along almost all lines, with improvement in service to the public and in net income to the workers, is the result of combinations of efforts into efficiency units of greater scope than may be found in one man.

To a large extent physicians are still trying to handle the great humanitarian service of the prevention and cure of disease on the basis of competition between individuals when, as a matter of fact, the discharge of our full duty requires a larger unit. No one man can be a competent unit for the discharge of all the duties of the physician. Not having the group organization of the business world and other professions, there is a strong tendency to act as brokers for the things we cannot do adequately.

The vices of *secret* fee-splitting, expensive institutions and many other familiar problems are perfectly natural outgrowths not of our faulty science, but of our faulty business methods. The one-man unit of service in medicine in this modern day sometimes means mediocre service to the patient, or brokerage connections that are expensive to the patient and time consuming for the physician. These basic facts explain to a large degree why our field of activity is being constantly narrowed, our work beyond individual effort made less effective, and the average income of physicians kept at a disgracefully low figure.

Governments and municipalities and non-medical voluntary societies have taken over most of the great field of preventive medicine; practically all large corporations have their own medical departments, run on business bases; insurance companies maintain medical departments and build and operate their own institutions; accidents and injuries are handled largely by the State, and so on through a long list, showing a constantly narrowing field for the individual independent medical man, while the big work of our profession in the prevention and cure of disease and the institutions necessary to our work are passing out from medical control to lay business management, and physicians are becoming more and more employes of the organizers of system or of politics.

It behooves the medical profession to give these matters more serious attention than they are now giving and to take the lead in solving what should be their own problems.

It is possible and desirable that competent physicians associate themselves together in groups in such a way that they can render better service, more economically, to sick people than they are now doing as individuals. This can be done and is being done by certain groups in such a way that there is no undue or unfair competition with the individual physician and in such a way as not to endanger the personal responsibilities and relations between the patient and any member of the group.

The first essential in any group formation is, that it have as executive a non-practicing member who has a practical economic training and at the same time has the true physician's ideals, altruism and love of service.

WILL "FOOD SPECIALISTS" SUPERSEDE PHYSICIANS

Before answering more definitely the inquiries that are being received from physicians over the State regarding nutrition and dietotherapy publicity, and in order that opinions of physicians may be available, the editor welcomes answers to the following questions:

Is nutrition and dietetics a medical or a non-medical subject?

Is dietetics, as it is being used in popular parlance, developing into another novel "system" of medicine? Why all the books and other publications by M. D.'s and other D.'s discussing the new (?) "science" of nutrition? Why the extensive independent organizations? Why the constantly expanding and extending courses by some schools? Why so much propaganda in so many private commercial, scientific, hospital, nursing and similar magazines? Why is it that most of these articles are thinly disguised criticisms of physicians and hospitals? Who is paying for the propaganda invading the movies, the fairies, the expenses of traveling lecturers and other circus food performers?

What is the meaning of the reports now coming into every medical center of the diabetics, chronic nephritics and other patients who are under the care of "food specialists" and food purveyors? Why do newspapers find it profitable to have "food specialists" pages? Why do department stores run dietetic departments? Why are so many mixtures of bran and chaff being advertised?

Is the public being prepared for the announcement of a new specialty of medicine to be conducted by non-medical persons? Has the time arrived when many persons are now being treated by these people without reference to a physician? Is it not about time that physicians gave this question some serious attention?

MINERAL WATERS

Among other classes of advertising, the California State Journal of Medicine carries the advertisements of a number of wholesome waters of one sort or another. Its columns are open to any ethical advertisement of an ethical product. The fact that an advertisement is carried in the Journal should be, and is, interpreted by every member of

the State Medical Society as an official endorsement.

There are a large number of so-called mineral waters on the market that are not advertised in the Journal and could not buy space in it at any price. The office has recently been furnished literature showing the endorsement by some of our members of waters that belong in this category. In some instances that have been investigated, it was found that the physician did not give such endorsement and did not authorize the use of his name; in others, physicians, without thinking seriously of the matter, have alowed their names to be used.

This matter is one of more importance in consideration of the public welfare and public health than is generally realized, and it is requested that before members of our society endorse a mineral water or other advertised products, they communicate with their State Society and find out the standing of the substance in the eyes of the medical profession.

THE ART OF MEDICINE

Abstracts from a Sympposium on this subject appearing in the New York Medical Times, August, 1921.

"Those of us who, now growing old, were brought up under great artists in healing, are more and more putting to ourselves the query: 'What is to become of the loftier motives and methods of remediation when the Art of Healing comes to merge into the strict Science of Medicine; when there shall come to be swept away such cobwebs, rather gossamer somethings, which once glorified the clinical domain?' Maybe they ought to fade away among fairy tales, fables, folk lore, epic poems, the spirit of chivalry, and other gracious influences, but there are those of us who cling fondly to the old order and feel a great regret that to perhaps most of our younger men it means nothing, for there was something in it without which their spiritual ductless glands, so to speak, will not functionate perfectly—indeed, without which their boasted science will be as sounding brass and tinkling cymbals.

"'Oh! the little more and how much it is;
The little less and what worlds away!'

"It is a deplorable thing that the fusion of what was best in the old regime with the new order of things could not have been more complete. Our highly evolved technology has made science a fetish, to the exclusion of all things else. And the Lenins of science have made the humanists afraid to call their souls their own. Hordes of these tyrants live by the laboratory, and, like a lot of ancient priests ruling a tribal people, sally forth from their temple now and anon to intimidate us with their incantations, which never fail to compel genuflections from a profession more superstitious than the rabble of the Middle Ages; we are science-ridden as men were once priest-ridden. So complete has been the change that there are doubtless standardized younger men who may read this editorial without sensing just what it is all about, or who have been so materialized as not to care. It is largely in the hope, however, that some of these Sauls will see a light as they journey toward a futile Damascus that we have written these things." (Editorial which appeared in May issue of the Medical Times, which occasioned the responses which make up the Symposium.)

"To do a thing so well as not only to surpass one's expectation of one's self, but deserve the commendation of one's fellows, comes near to being a definition or art." (J. Madison Taylor, M. D.)

"The secret of success in medicine lies in the close personal interest in patients, and one's personal power to influence them morally, spiritually and mentally—and *through these physically*. That contact is being lost by the diversity of processes which people are now put—laboratories, X-rays, chemists, dentists, etc.—all of which detract from the personal element. Hence, as an art, medicine is losing." (M. Allen Starr, M. D.)

"In the last analysis, the strength of an organization will be found to rest on the character and equipment of the individual members. One would gather from many of the various 'social welfare' undertakings prevalent in this day that the study of man as man had been abandoned, that the springs of human action had been forgotten, and that a new being was in process of creation. Marx's system of socialism, with which many have been so enamored and which has tainted multitudes and disturbed the body politic, lost sight entirely of the nature of the being it was attempting to deal with for this very reason. This system, as many collateral ones, failed to take note that besides appetites, man, as he came from the Creator's hand, possesses affections and mental desires and moral sentiments and also those reflex sentiments, as exhibited in the desire for love and esteem and self-approval. That failure dooms all such systems to destruction from their beginning. It is only in allowing and encouraging man to apply his personal ability and to make the best of it that progress is made. This is illustrated in every department of human endeavor." (Henry A. Fairbairn, M. D.)

"I have not yet spoken of medicine as an art—as a fine art. It is, in my belief, or should be, the finest of them all. The doctor, the beloved physician, should care for men's bodies the best he knows how, until recovery or the end comes. When the latter, alas, he should bow his head, bend his knees and call in humble prayer to the Almighty Saviour of all men to have mercy upon the man or woman who has gone, and upon all who are left behind and who are near and dear ones, still on earth. Can pure science ever give us such a vision, or come near to such a calling? I do not believe it. I stand for everything that is true and good in the science of medicine, but I proclaim most earnestly that what, after all, has to do with man's most sacred and endless emotions, aspirations, beliefs, affections, and with love over and beyond everything, must ever be and remain the noblest, the best of all human arts." (Beverly Robinson, M. D.)

Yosemite's Comfortable Cabins

To the average person, the term "cabin resort" conjures up some dreadful vision of sleeping on the ground and eating from a tin plate. Let it be said here for the benefit of those who will attend the 1922 convention of the Medical Society of the State of California in Yosemite National Park, May 15 to 18, that the trip involves no such hardship or sacrifice of comfort.

"Why it isn't like the mountains at all," exclaimed one woman from the East, a guest at Yosemite Lodge, when she learned that she could have her breakfast, piping-hot, served at her bedside any morning that she desired to give the order.

Such a comment was not intended to mean that the noble cliffs and waterfalls of Yosemite Valley had been ruined by the erection of buildings out of keeping with the natural surroundings; rather, it was a spontaneous compliment to service rendered at the Lodge, fifteen miles from a railroad, service that measured up to standards of city hotels and far exceeded what the visitor had found at mountain resorts in other sections.

Yosemite Lodge is a little city in itself. "A charming colony of redwood cabins under the pines at the foot of Yosemite Falls, the cabins being grouped around a community center of office, dining-room, lounge, writing room, dance pavilian, theater, swimming pool, children's playground, and nightly camp fire" is the description usually given of it.

The Lodge has its own postoffice, the name of which is Yosemite Lodge, Calif., and mail so addressed is delivered direct from trains without the delay of going through the main office in the village, the name of which is Yosemite, California. The Lodge also has its own telegraph station, Yosemite Lodge, Calif., and long distance telephone facilities. Baggage can be checked straight through to Yosemite Lodge.

In the American Plan dining-room of the Lodge, there is individual service for each guest. The dining-room linen is snowy white, and waitresses and bus boys are uniformed in white.

The other public rooms and broad verandas of the Lodge main group need no special mention, but a word should be said here about the services in the swimming pool group, just across the plaza. The pool is 120 feet long, filled with crystal mountain water, which is heated to a comfortable temperature by steam. Suits can be rented. After a plunge, there is a barber ready to serve the men, a beauty parlor with all modern equipment for hairdressing, facial treatment and manicuring for the women. The laundry in the same group offers high-class service, including the cleaning and pressing of clothing.

Every evening there is an entertainment of merit at the Lodge free to all guests. It might be mentioned here that Ruth St. Denis and Ted Shawn, internationally famous dancers, were among the artists who appeared at the Lodge last year. Every evening except Sunday there is dancing to the music of an excellent orchestra.

A word also should be said about the "cabins" which make up the Lodge's living quarters. Three types of cabins are provided.

The first type is built of redwood in rustic style that harmonizes with the tall pines and spruces around. A generous porch gives entrance to a bedroom with twin beds and other furniture of special design and finish. Dressing room, closet or wardrobe provides ample space for hanging up clothes. The bathroom includes tub, washbasin and sanitary flush toilet of spotless porcelain; in a few of the cabins there are shower baths. Many of these cabins also have screened and curtained sleeping porches on the rear. Electric stoves, 5000 Watts, furnish heat at a turn of the button. American plan, rate $7.50 per person per day.

Redwood cabins without bath make up the second group. Like the cabins with bath, they are furnished with twin beds. Sliding curtains are arranged so that each cabin, 12 x 14 feet in size, can be divided into two private sleeping compartments and a sitting room. Bowls and pitchers are provided and small stoves burning fragrant cedar or pine wood are used for heating. American plan, rate $5.50 per person per day.

Canvas cabins form the third group—and do not confuse the Lodge's canvas cabins with tents. Canvas cabins here are all that the name implies—houses with canvas for walls. They are floored, have electric lights, a screened door and six screened windows with awnings and curtains. Furnishings are similar to those in the redwood cabins without baths. European plan, rate (lodging only) $1.50 per person per day. American plan, rate (with meals in Lodge dining-room) $5.50 per person per day.

Maid service in all cabins assures plenty of towels and, in the cabins without bath, fresh water also. Hot water for the morning toilet may be had without extra charge by those living in cabins without baths, by leaving number of cabin and hour desired at the office of the Lodge.

COME TO YOSEMITE

MAY 15 TO 18

1922

Chaulmoogra Oil Therapy in Leprosy

EDITOR'S NOTE—Literature is rapidly accumulating regarding chaulmoogra oil and its use in the treatment of leprosy. Lay publications are taking an interest in the discussion of the subject and some of the literature, both in scientific journals and lay press, fails to give credit where credit is due. We have received a number of letters of inquiry from physicians regarding the inaccuracies that are being published. In reply, the Journal has had the following notes prepared covering the outstanding features of the oil and its therapeutic value. Comparatively few people realize the fact that much of the recent progress in this field is due to researches carried out in the Hooper Foundation for Medical Research in San Francisco.

Chaulmoogra oil is obtained from the seeds of a tree, Taraktogenos kurzii, native of Burma. This tree bears a fruit the size of an orange, containing many irregular, brown seeds, rich in oil. The oil, which is expressed cold from the seeds, is a heavy oil solidifying at 22°-23° C. and having a characteristic disagreeable odor.

The chemistry of chaulmoogra oil was first adequately investigated by Power and his collaborators at the Wellcome Chemical Research Laboratories, London, from 1904 to 1907. Their investigations disclosed that chaulmoogra oil consists chiefly of the glycerole esters of a hitherto unknown series of fatty acids, having peculiar structural and chemical properties. All previously known fatty acids have a straight chain arrangement of the atoms in the molecules and are optically inactive; acids of the chaulmoogric series have the atoms arranged in a five-membered ring with a side chain of variable length and are optically active. These authors isolated and determined the constitution of two fatty acids of the chaulmoogric series: chaulmoogric acid, $C_{18}H_{32}O_2$ and hydnocarpic acid, $C_{16}H_{28}O_2$. It is probable that one or more lower homologues of this series are also present in chaulmoogra oil. Subsequent investigations have shown that these cyclic fatty acids are present in variable quantities in the seeds of many trees closely related to Taraktogenos kurzii, belonging to the botanical family Flacourticeae, but not elsewhere.

Chaulmoogra oil has had a popular medicinal reputation among the natives of India since prehistoric times, being employed externally and internally for the treatment of leprosy and also for the treatment of various skin diseases for which it is probably useless.

The first use of chaulmoogra oil by the medical profession in the treatment of leprosy is somewhat obscure. Morrow states that the drug was first used by Le Page of Calcutta. British scientists, it is stated, undertook the distribution of the seeds of Taraktogenos kurzii in 1856, but by mistake collected the seeds of an entirely different tree. By the end of the nineteenth century, it had become generally recognized that chaulmoogra oil was the only drug that offered any prospects of a successful treatment of leprosy; but many leprologists considered it rather as a palliative than a curative agent. It was formerly administered in the form of a crude oil, by mouth. This oil is, however, so nauseating and causes such serious digestive disturbances that few patients are able to continue the treatment long enough and intensively enough to obtain therapeutic results. Nevertheless, the literature records a considerable number of cases of leprosy improved, arrested and even apparently cured by this method of administration.

Many attempts have been made to obviate the digestive disturbances and to otherwise improve the therapeutic action of the oil. Subcutaneous and intramuscular injections were tried as long ago as 1899 by Tourtoulis-Bey, in Cairo, with some beneficial results, but no cures. The heavy oil is slowly absorbed, causes much pain and sometimes abscesses and occasionally pulmonary embolism. Somewhat better results have been obtained by the subcutaneous or intramuscular injection of various mixtures of chaulmoogra oil, of which the essential feature is the thinning out of the heavy chaulmoogra oil by a lighter oil, in order to obtain better absorption. The best known of these mixtures is that of Heiser and Mercado, which has been used quite extensively. Heiser reported a number of apparent cures of leprosy by its use in the Philippine Islands.

A second method of overcoming the drawbacks to the use of crude chaulmoogra oil has been to separate the fatty acids and convert them into the soluble sodium salts. There were some earlier attempts to make use of the fatty acids and their salts in leprosy, but, however, the first serious employment of this method in the treatment of leprosy was by Sir Leonard Rogers in India in 1916. Since that time the sodium salts of chaulmoogric acids have been employed by Rogers and his collaborators very extensively, both by subcutaneous and by intravenous injection, in the treatment of leprosy in India, with a reported high percentage of improvement and many apparent cures. The sodium salts have the disadvantage, however, of being very irritating to the tissues.

Rogers is of the opinion that the therapeutic action of chaulmoogra oil in leprosy is due, not to the peculiar cyclic structure of the chaulmoogric acids, but that it is a property of unsaturated fatty acids in general, which attack in some manner the acid-fast bacilli. He has, therefore, prepared the sodium salts of the fatty acids of cod liver oil, which he calls sodium morrhuate, and later of the fatty acids of soya bean oil. Rogers and his collaborators have used these preparations in the treatment of leprosy, and claim equally as good therapeutic results as with the sodium salts of chaulmoogra oil. Rogers also suggested that the unsaturated fatty acids and their salts might be of therapeutic value in tuberculosis, and he and his colleagues have employed sodium morrhuate for this purpose and reported some encouraging results.

Power and Gornall (1904), during their investigation of chaulmoogra oil, prepared the methyl and ethyl esters of chaulmoogric acid and studied their properties. In 1909, Ludwig Taube obtained a German patent, assigned to Farbenfabriken vorm. Friedr. Bayer & Company, of Elbereld, Germany, and later patents in England and the United States, covering the preparation and use of the ethyl esters of chaulmoogric acids in the treatment of leprosy. This derivative of chaulmoogra oil was put on the market under the trade name of "Antileprol." Antileprol appears to have been used by a few physicians with indifferent results, and to have attracted but little attention of leprologists. Subsequent to the war and the confiscation of German patent rights, the Alien Property Custodian of the United States Government sold the patent rights for the preparation of the ethyl esters of chaulmoogric acids ("Antileprol") to the Winthrop Chemical Company, of New York, who have put this derivative on the market under the trade name of "Chaulmestrol."

In 1919, Hollman and Dean sought a non-irritating and readily absorbable derivative of chaulmoogra oil for treatment of lepers in the Hawaiian Islands. Dean, President and head of the Department of Chemistry of the College of Hawaii, prepared the ethyl esters of various fractions and of the total fatty acids of chaulmoogra oil, which Hollmann used for the intensive treatment of lepers. This therapeutic investigation was later continued by Dean and McDonald. In their latest publication (1921), McDonald reported 142 cases of leprosy paroled as apparently cured by intramuscular injections of the ethyl esters of chaulmoogric acids during the preceding two and one-half years.

At present, Professor Dean and his assistant, Dr. Wrenshall are working on esters of lower homologues of chaulmoogric acids which have a lower molecular weight, are more highly unsaturated and are believed to have a greater therapeutic value. Meanwhile, the clinical side of the work has been taken over by Dr. Hasseltine, of the United States Public Health Service. The United States Public Health Service has taken a conservative stand on the therapeutic results of the ethyl chaulmoograte treatment of leprosy in the Hawaiian Islands, as is indicated by a short article in Public Health Reports (1921). Some relapses of paroled patients have occurred, and they prefer to speak of the paroled patients as having the disease arrested rather than cured. The report states: "In properly selected cases, especially in the young and in those who are in the early stages of the disease, the clinical improvement is rapid and striking. The result is less favorable in older persons and in case of long duration. At this time, we cannot say that the ethyl esters of chaulmoogra oil are a cure for leprosy."

Until 1920, the use of chaulmoogra oil and its derivatives in the treatment of leprosy was wholly empirical. There existed no scientific knowledge of how chaulmoogra oil acted in leprosy, the nature of the active substance in the oil, and whether its therapeutic action was specific for leprosy or might include other diseases. In that year, Walker and Sweeney, working in the George Williams Hooper Foundation for Medical Research, San Francisco, published the results of an investigation of these problems. It was determined experimentally that chaulmoogra oil contains substances having a high bactericidal activity. This bactericidal activity was found to reside in the fatty acids of the chaulmoogric series, and to be a function of the carbon ring structure, which is peculiar to the chaulmoogric acid series. The bactericidal activity of these cyclic fatty acids was shown to be specific against the acid-fast group of bacteria, to which the bacilli of leprosy and tuberculosis belong and absent toward all other bacteria. Walker demonstrated that other unsaturated fatty acids, such as those of cod liver oil, did not possess the specific bactericidal activity of the chaulmoogric acids. From these experimentally determined facts, it was concluded that the therapeutic action of chaulmoogra oil and its derivatives in leprosy was due to its direct bactericidal action; that Rogers' claim for the therapeutic action of the sodium morrhuate was unsupported; and it was suggested that there were theoretical grounds for believing that chaulmoogra derivatives might be of therapeutic value in tuberculosis.

NATIONAL BOARD OF MEDICAL EXAMINERS

This board was organized in 1915 as the result of action by the American Medical Association. Its purpose is to establish in the United States a standard qualifying examination which can be safely accepted by all State Boards of Medical Licensure as an adequate qualification for the practice of the healing art. Although in operation only six years, this board is now accepted by the United States Army, Navy and Public Health Services as qualifying for admission to their medical departments. The boards of medical examiners of twenty States now also accept the reports of this board in lieu of their own examinations.

The importance of this board is being more and more realized and the magnitude of its work is increasing tremendously. The method of examination has been modified so that it may be taken in three parts at separate times. Persons who desire to take this examination and who are interested in its workings—and this should include every young physician in the United States—should address Dr. J. S. Rodman, Secretary, 1310 Medical Arts Building, Philadelphia, Pa.

Lane Lectures

Summary of Lane Medical Lectures for 1921 delivered by Dr. L. Emmett Holt, Emeritus Professor of Pediatrics, College of Physicians and Surgeons, Columbia University, New York, at Stanford University Medical School. (Reported by H. K. Faber, M. D., Stanford University Medical School.)

The eighteenth course of Lane Medical Lectures was delivered by Dr. L. Emmet Holt, Emeritus Professor of Pediatrics, College of Physicians and Surgeons, Columbia University, New York, on the evenings of December 5, 6, 7, 8 and 9, 1921, at Lane Hall, Stanford University Medical School, San Francisco, California.

The first lecture reviewed the problems of nutrition, especially as they affect children, the main emphasis being placed on the period after the second year. While underfeeding in adults impairs efficiency it may not greatly impair health, but in children it prevents growth, both mental and physical, and impairs health as well. Resistance to disease is lessened and children become underweight, stunted and anemic.

The selective draft showed about 30 per cent of our young adults unfit physically for military service, and statistics of our schools show that about the same proportion of our school children are underweight or suffering from the effects of malnutrition. The responsibility for this lies with the home, the State and the medical profession. Parents are ignorant of the simplest principles of nutrition; discipline is largely wanting and poverty plays also a certain part, though less in importance. Our medical schools lay too much emphasis on disease and too little on health. The physician's office is too much regarded as a repair shop. The Federal, State and municipal governments have largely neglected the health of children. $9,700,576 was appropriated for the Department of Animal Industry against $271,000 for the Children's Bureau. The average appropriation in twenty-four cities with a population of 250,000 was $1.05 per capita and in eighty cities with a population over 12,000, 71 cents per capita. Many good-sized towns spend less than 15 cents per capita, less than the average admission to a moving picture show.

Stature is affected more by food than by climate. Japanese children in this country are taller and heavier than those in Japan. Native American children of the present generation are taller and heavier than their parents. Nutrition has an important bearing on progress in schools. Ayers has shown a close correlation between the nutrition and the proficiency in their studies of school children in Deroit. Moreover, poor nutrition makes children enter school late and have frequent absences. We cannot fill the head when the stomach is empty, nor can we expect application or concentration of mind from an anemic, nervous child who is twenty or thirty pounds below normal weight. The estimated cost of educating retarded children in the United States is $27,000,000 yearly. It might prove a matter of economy, if some part of this $27,000,000 was devoted to health education and hot school lunches.

The state of nutrition has a very important bearing on resistance to disease. Trudeau's experiments with tuberculosis in guinea pigs shows this, and clinical experience with pneumonia, empyema, typhoid fever, dysentery and other infections point to the same conclusion. The number of specific remedies for disease is small, and for a long time to come it will be the duty of the physician to treat the patient rather than the disease itself. This means very largely the maintenance of nutrition. Growth and repair are closely related processes and influenced by much the same conditions. This is particularly true in childhood. If underfeeding is continued past the normal period of growth, later growth becomes impossible

and dwarfing occurs. This has been shown experimentally and clinically. If to prolonged underfeeding chronic disease is added, which is so often the result of such feeding, the consequences are likely to be permanent stunting of growth, a high mortality in early adult life, impaired physical energy, lowered mental capacity and premature old age.

Through education infant mortality has been enormously reduced. It is not too much to expect that with a better understanding of the subject of nutrition there may be accomplished for the older child something comparable to what has been done for the infant.

SECOND LECTURE

The subject of this lecture was the metabolism of childhood. The requirements for basal metabolism are fairly uniform for children of the same age and weight. Requirements for growth are naturally greatest during the periods of most rapid growth. There are two such periods: first, during the first year, and second, with the approach of puberty. The maximum demands for growth are for girls during the thirteenth year and for boys during the sixteenth year, after which the requirements decline to nothing at the end of the growth period. Eight to fourteen per cent of the entire food taken is required during childhood. The loss in the excreta at all ages is about 10 per cent of the food given. The requirement for activity varies enormously with different children. With some it is two to three times as great as with others. The activity requirement is made up of two factors, first the energy consumed in the processes of the digestion, which is about 6 per cent of the food taken, and second, the amount needed for muscular activity. The latter begins to increase rapidly when the child learns to walk and increases steadily but not rapidly from then on to the time of puberty. The great differences in activity are not sufficiently taken into account in providing diets for children. A very active child may use up so much food for energy that he has none left to supply the needs for growth. Especially during adolescence the food requirements given in the earlier estimates have been much too low. At St. Paul's School in Concord, N. H., it was found that boys between thirteen and seventeen years of age took an average of 5000 calories daily. Compare this with the usual allowance of 3400 calories for an adult man doing moderate work, and the allowance of 3800 calories for soldiers in our army camps. The enormous appetite of boys and girls during the rapidly growing period has a sound physiological basis. If these food needs are not satisfied, both growth and physical development suffer.

An interesting analogy was drawn by the lecturer between food intake and the use of monetary income. Overhead expenses correspond with the basal metabolic needs, normal activity, loss in excreta and digestive work. The remainder may be spent (used in excessive activity) or saved; that is, used for growth. Excessive activity is always at the expense of growth, unless the amount of food taken is correspondingly increased.

THIRD LECTURE

In the third lecture the special uses of protein, fat and carbohydrate were discussed. The protein must be adequate both in amount and in quality to assure proper growth. Many protein foods, especially the vegetables, do not contain adequate amounts of certain essential amino acids. The protein of woman's milk contains all the amino acids required by infants in the correct proportions so that the 1¼ per cent of protein found in woman's milk is adequate. Animal proteins in general are high grade proteins, but are deficient in some respects. Thus cow's milk, which is relatively lacking in cystin and lysin, must be given in double or treble the quantity required with woman's milk to insure adequate growth. The best results in children are obtained when 15 per cent of the food is protein with fully two-thirds of it as animal protein. Fat, in spite of occasional assertions to the contrary, is an essential part of the diet. Certain diseases, especially kerato-malacia, comparable to the xerophthalmia found in experimental animals, are occasionally seen when children are fed on a fat-free diet. Fat is the carrier of vitamin A, which is essential in growth. Animals, but not children, can be reared successfully when low fat diets are given over long periods of time. Growth is retarded and susceptibility to infection increased. Normal stools are never seen in children fed on a low fat diet. The probable reason for this is that the soaps have the function of neutralizing the acid formed in the intestines from fermentation of the carbohydrate. The high fat content of all milks is a conclusive argument for the importance of fats in the diet of the young.

The carbohydrates have the advantage that they are cheap and usually well digested. In infancy most of the carbohydrate is in the form of sugar and after infancy about half is sugar and half starch. Charts were shown giving the proportion of fat, carbohydrate and protein, the distribution of carbohydrate as sugars and starch and of the protein as animal and vegetable proteins in the diet of 106 children studied by the lecturer. The proportion of 15 per cent of the calories as protein, 35 per cent as fat and 50 per cent as carbohydrate was strikingly constant. The optimum proportion of protein, fat and carbohydrate by quantity appears to be 1⅓. The sugar, which represented about half the total carbohydrate was distributed about equally between fruit sugars and cane sugar. About two-thirds of the protein was animal and one-third vegetable. The protein intake is about four grams per kilo at one year, after which it diminishes to 2.6 grams per kilo at six years, continuing at this figure until the end of the growth period.

FOURTH LECTURE

The vitamins were discussed. The danger of losing perspective because of the dramatic experimental effects observed and because of the wide publicity which these substances have obtained was emphasized. There are three recognized vitamins—the fat soluble, or vitamin A; the water soluble, or vitamin B, and the antiscorbutic, or vitamin C. These are indispensable for health and growth, and since the animal body cannot manufacture them they must be supplied in the food.

Vitamin A is present in animal fats, egg yolk, in liver and kidney tissues, and is particularly abundant in codliver oil. Vegetable oils contain practically none. It is also present in green vegetables such as cabbage, spinach and lettuce, and also in alfalfa and clover. The exact role of vitamin A in human nutrition, we do not know. Animals deprived of it cease to grow after a few weeks and suffer from sore eyes, which, if not treated, may be completely destroyed. A prompt cure occurs if a very small amount of butter or codliver oil is added to the diet. Similar symptoms have been observed in children occasionally.

Vitamin B is found in nearly all our foods in varying amounts. It is abundant in eggs, meats, seeds, vegetables, fruits, milk and in brewer's yeast. It is not injured in cooking or drying, but is removed from wheat in the process of milling, so that it is practically absent from white wheat flour. In animals, deprivation of this vitamin leads to muscular weakness and paralysis.

In man it leads to beri-beri.

Vitamin C, the antiscorbutic, is found chiefly in fruits and vegetables. Citrus fruits, cabbage and tomato are rich sources. It is nearly always injured and may be destroyed during the preparation and preservation of foods, though the sus-

ceptibility to heat varies. Dried cabbage, dried tomato and canned tomatoes are efficient antiscorbutics as also is dried orange juice or lemon juice, even when kept for a long period in sealed packages. In milk this vitamin is present in very small amounts, so that two quarts of milk contain only as much as one ounce of orange juice. Pasteurizing, sterilizing, boiling, drying or condensing injures this vitamin in milk to a greater or less degree so that the only safe rule is, when milk that has been heated in any one of these ways is used, to give some antiscorbutic such as fresh fruit juice or tomato juice. Half an ounce a day given regularly is sufficient to protect most infants. It appears that babies are born with a store of this vitamin sufficient to last five to eight months. It is important to remember that when enough vitamins are provided in the diet to avert the diseases caused by vitamin deficiencies this is all that can be accomplished by them. Giving greater amounts cannot accomplish further results. The use of vitamins without definite indications will be popular for a time like other fads. It is important to note that modern transportation conditions have made it necessary to refine and preserve foods (thus destroying much of the natural vitamin content) in order that large centers of population may be fed and may have reserve stores of food, hence the necessity for the use of a certain amount of fresh foods containing vitamins in our diet.

FIFTH LECTURE

The fifth lecture was devoted to a general consideration of how defects in nutrition can be met and overcome. Having considered the low standards of nutrition, which we have permitted to exist among children and other consequences in adult life, how can improvement be effected? The greatest agencies for promoting reform along any line are publicity and education. In child work we must combat not only the ignorance of the ignorant but, to quote Chesterton, the ignorance of the educated.

Malnutrition may be briefly defined as a condition in which a child has failed to reach the degree of physical development which may be considered normal for his age. The best simple standard is the weight and height, especially the weight for the height, which has been reached at any age, and the rate of increase in height and weight which is made each year.

Among the causes of failure to obtain normal physical development are bad inheritance, premature birth, previous acute or chronic illness, physical defects such as carious teeth, enlarged or diseased tonsils or adenoids. Failure in nutrition may be the first sign and only obvious symptoms of tuberculosis, nephritis, cardiac disease or grave anemia. The great majority of cases are due to improper food or faulty hygiene. Dietary defects are characterized by lack of essential elements of growth such as an adequate supply of high grade protein, a liberal amount of fat, an ample supply of mineral salts for bone and the three vitamins. All these are provided if reasonable quantities are given of milk, cereals, green vegetables and fruit, but they are not present in coffee, white bread or sweets. Bad habits, which adversely affect nutrition, are eating at irregular times, eating sweets and other trash between meals and rapidly eating without mastication.

Examples of faulty hygiene are overcrowding, lack of fresh air in sleeping rooms and school rooms, lack of opportunity for outdoor play, late hours with insufficient sleep, no opportunity for rest in the middle of the day after the third or fourth year, over activity with either too much work or too much play, so that no food is left for growth, habitually bad posture and chronic constipation from lack of regular habit.

As a criterion for under-nutrition the lecturer takes 10 per cent below the average weight for height under the age of twelve years with a somewhat larger allowable variation during the period of adolescence. Age must be taken into consideration since of two children of the same height the older is normally heavier. Two types of undernourished children may be distinguished; first, the dull, listless child who is easily fatigued and has poor muscular development and flabby tissues; second, the ambitious, excitable over-active child, hard to manage, who sleeps poorly and has good muscular development but little or no subcutaneous fat. Normal children occasionally fail to gain for a period of a few months, but a stationary weight, for a prolonged period or steady loss at any time, should never be disregarded. There are between six and ten millions of undernourished children in the United States in which four-fifths of whom the condition is remediable. The treatment is both preventive and remedial, the former being vastly the more important. Preventive treatment includes eugenics, suitable prenatal care, maternal nursing and the best infant feeding and hygiene. The child should receive better care than he does between the second year and the time he goes to school. He should be weighed at regular intervals and his diet and life should not be the same as those of the older members of the family. He should have a general physical examination by a physician every six months and the records thus obtained with those of his weight could be made available at the time of school entrance to the teacher and school physician. On school entrance every child should have a thorough physical examination in the presence of the parents by the school physician who would note any abnormalities and would then have a sound basis for planning school hours, work, exercise and athletics. While an examination of every school child at the beginning of each school year is desirable it is perhaps not feasible at present, but certainly a physical and mental examination should be required of every child whose school work falls much below the average. More can be accomplished by health education than by any other means. This must be directed to the children rather than to their parents, and it should be begun at an early age. It can be done better in the school than in the home. In school the child expects to be taught and what he learns has an authority which home teaching, with its don'ts and you mustn'ts, does not possess. The vital point is to make health attractive and its aim should be to make the child form proper habits. Those stressed by the Child Health Organization of America are as follows:

A full bath more than once a week.
Brushing the teeth at least once every day.
Sleeping long hours with windows open.
Drinking as much milk as possible, but no coffee or tea.
Eating some vegetables or fruit every day.
Drinking at least four glasses of water a day.
Playing part of every day out of doors.
A bowel movement every morning.

How to get the children to adopt them? Health talks do not suffice. We must not make work of our health teaching in the school, but seek to make it play, for we can get children to do almost anything if it is made play. We should aim to get into their minds that health, too, is a game, with its rules like other games; a game that one can win or lose according as he obeys the rules. The play motive is the most successful one up to the ages of ten or eleven. Unless the child is interested, it is hopeless to attempt to influence him, so we begin if we can with something which is dramatic and which will catch the child's interest, like Chi-Cho, the health clown, the Health Fairy, the Jolly Jester or some of the other dramatic characters of the Child Health Organization, who

introduce health teaching under the guise of amusement or entertainment.

Those who see in this modern movement for the health education only amusement for an hour have not grasped the point. These things are only the beginnings, the first lessons in health—kindergarten lessons if you will—but they are based upon sound psychology; before you can influence you must interest.

Much can be done by health plays, poster exhibits, poster contests with prizes, health rhymes to interest the child, but the best means at all ages is the use of weight and height measurements. This should be done in the school room. It is, of course, necessary that scales should be in the schools and that weights be taken regularly during the school year, usually once a month. The weights for the children of a single room may be entered upon a large chart hung in a conspicuous place. Opposite the initial weight, the average weight for the height is recorded so that the child can see where he stands, and what progress he is making each month.

One must see one of these monthly weighings properly conducted to appreciate their significance. They are made important occasions, and the interest of the children is often intense. The scales are placed at the point of the weight taken the previous month and when a child steps upon the platform eager eyes watch whether the bar will rise or fall, indicating a gain or loss for the month. When the weighing is finished one teacher addresses her children somewhat as follows:

"Now will every child in the room who is up to normal weight for height stand up.

"Children, I could tell it by your looks; by your bright eyes and rosy cheeks, by the work you did in school this month; by the way you play at recess, etc., etc."

All, of course, are delighted and very much pleased with themselves.

"Now, will every child who gained in weight last month, stand."

More words of commendation follow, then the teacher says to a group: "Now won't you tell us how you did it." Many hands go up as each wishes to relate his own personal experience.

When a child is found at the monthly weighing much under weight or not gaining he is anxious to know why. He wants to be in the healthy group. Now is the opportunity to stress the health rules.

Children become vitally interested in their progress. They are then ready to understand and anxious to follow the rules, to submit to medical examination, to have tonsils, adenoids and teeth removed. Health records go home and arouse the interest of parents who will see that a suitable diet and good home habits are of importance.

It is not necessary or desirable that health be taught as a separate subject in the schools, but that it should be brought into the teaching of the various common subjects. It can be introduced illuminatingly into the teaching of such things as history, geography, arithmetic, drawing and composition. A debate could be arranged with the subject: Resolved that the City of San Francisco should furnish half a pint of milk a day at morning recess to every child in the public schools. Think what an opportunity to teach those who take part in such a debate the uses and value of milk. And what a chance to educate the school superintendent if he could be induced to act as one of the judges on such a debate.

Very little apparatus is needed, scales being perhaps the only expensive article. The lecturer remarked that it is not too much to say that the scales have saved the lives of more children than any new device of treatment, medical or surgical. The teacher needs no great special training—mainly enthusiasm and an understanding of children.

Nutrition classes will always be necessary for those so far below normal as to need special attention. Good nutrition classes are impossible without medical assistance. A thorough physical examination is essential. Co-operation with good children's clinics is desirable for investigation and treatment of physical defects and the services of a school nurse are also essential. A desire for improvement must be awakened in the child and this is best done in groups with graphic weight records. Competition is aroused by seeing the progress of other children. Regular attendance is necessary. The school is the best place for nutrition classes. Children should not be taken out of school unless absolutely necessary, but study, exercise and rest should be adjusted to the needs of the child. When he has reached the proper weight for height he may graduate with some ceremony and be given a certificate. To be successful nutrition classes must have a trained enthusiastic, resourceful personnel who understand children.

In conclusion the lecturer submitted three propositions which seem to be very clearly established:

1. Every health movement, which is to bring permanent results, must have an educational basis.
2. The health education of the future must be directed to the teaching of the children.
3. This education must be done in the schools. To initiate this program is the work of the physician. To carry it out is the task of the school authorities.

THE REJUVENATION OF MEDICAL ETHICS

By FRANK B. WYNN, Journal of the Indiana State Medical Association, December 15, 1921, page 422

Dr. Wynn's article should be read and pondered by every physician everywhere, and it ought to be read by the public.

Perhaps there is no phase of medicine concerning which there is so much misinformation as concerning the commonly designated "Code of Medical Ethics."

"It represents a most commendable effort on the part of the intelligent and progressive elements of medicine, to conserve the idealism of the medical past. It seeks to elevate the standards of practice and scientific attainment, of gentlemanly and moral conduct, for the benefit of the patient first of all; for the mutual instruction and elevation of the profession; and in the interest of the public weal."

As the Decalogue was to the ancient Hebrews, so let the profession of medicine find light and guidance in a revival of "The Ten Commandments of Medical Ethics."

The Ten Commandments of Medical Ethics

(Quoted from Dr. Wynn's Article)

I. REVERENCE AND RESPONSIBILITY

Remember thy Creator in the days of professional youth. Bow reverently before the wonderful human body, silk or well, as thou wouldst before a sacred shrine, conscious of thy high duty; resolved to serve to the best of thy power, whether the patient be black or white, prince or pauper, saint or degenerate.

II. HISTORIC APPRECIATION

Honor thy father and thy mother. Likewise give praise to the fathers in medicine, whose rich heritage of scientific and clinical truth has been handed down to thee through centuries of patient toil. Hold fast to that which is good, but let not prejudice, coming out of the past, blind thy vision to the newer truths of medical advancement.

III. KEEPING THE FAITH

Thou shalt not worship the graven images of false practice—of avarice and selfishness which eat at the very heart of medical idealism; of clever

artifice or brazen quackery which knowingly deceives; of erratic isms and cults which tell but half truths, leading the ignorant and unwary astray.

IV. INVIOLABLE CONFIDENCES

Thou shalt not disclose the secrets confided to thy keeping by trusting patients unless they be of criminal or treasonable import. Nor shalt thou abuse the professional intimacy granted to thee by women, which becomes a professional and moral obligation thou shouldst hold inviolate.

V. THE SANCTITY OF LIFE

Thou shalt not hazard life unwarrantably; neither shalt thou shrink before the obvious perils of duty when life is at stake. The unborn shalt thou not destroy except after due consultation, it is deemed advisable for the larger saving of life. Suffer not death to come through neglect in care of the sick, nor from failure in reading, study and counsel to gain the greatest benefit for the patient.

VI. PROFESSIONAL CO-OPERATION

Thou shalt not bear false witness against a worthy professional brother, but seek ever to protect his good name from calumnious attack by misinterpreting laymen. Of thy knowledge give him unstintingly, counseling and co-operating for medical progress.

VII. GENTLEMANLY CONDUCT

Thou shalt not prate of cases nor countenance unseemly boasting of thy achievements in the lay press. Always be a gentleman, let thy conduct be reserved but without cowardice; courteous but free from flattery; dignified but of warm heart; tender in ministration but firm in command; clean of body, speech and mind.

VIII. HONESTY IN BUSINESS

Thou shalt not steal; neither shalt thou make extortionate charges nor deceive by the secret division of fees. As a laborer worthy of hire exact fair compensation, but by open methods and with conscience void of offense toward thy fellowman.

IX. OBLIGATION TO ONE'S OWN

Take heed of the morrow for the sake of thine own flesh and blood. Therefore, shalt thou keep orderly accounts, collecting from the full-handed just recompense for services rendered. To the poor and the families of deserving colleagues, thou shouldst account it a privilege to render faithful attention.

X. PERSONAL AND PUBLIC SERVICE

Remember thou art thy brother's keeper—physically, in the measures and remedies advised for the prevention, alleviation or healing of disease; spiritually, in the cheer thou bringest to heavy hearts and the courage thou givest to halting steps. So walking upright before man, mayest thou shew thyself approved unto God. Thus journeying toward life's end, if not singing with the Psalmist "My cup runneth over," thou wilt at least be sustained by the reflections of "A workman that needeth not be ashamed."

Life Insurance—This issue of the Journal carries the card of Miss Edee H. Percival as a life insurance solicitor. Miss Percival has the endorsement of a number of leading men of our profession as being both capable and interested in giving to physicians the very best advice in placing life insurance policies.

Radiologists Liable—The Supreme Court of Arkansas has recently held that radiology (roentgenology) is a highly technical profession and that the radiologist, and not the physician, is liable for his acts. A more extensive review of this decision is published in a recent number of the Literary Digest.

EXTENSION WORK

The following additions have been made to the Extension Lecture courses offered by members of the State Society to local societies: (See November Journal for other lectures, page 450.)

MILEY B. WESTON, M.D.,
686 Flood Building, San Francisco.

I—**Urethritis and Its Complications.** (Illustrated by lantern slides.)
1. The Anatomy and physiology of the urethra.
2. Etiology: specific and non-specific urethritis.
3. Pathology.
4. Symptoms: acute and chronic.
5. Complications: stricture, prostatitis, vesiculitis, verumontanitis, cowperitis, stricture of ejaculatory ducts, epididymitis, etc.
6. Treatment: medical and surgical.

II—**Prostatism.** (Illustrated by lantern slides.)
1. The anatomy and physiology of the prostate.
2. Prostatic calculi.
3. Prostatitis: (a) acute; (b) chronic.
4. Tuberculosis of the prostate.
5. Prostatic hypertrophy, benign.
   (a) Etiology and pathology.
   (b) Symptoms.
   (c) Diagnosis.
   (d) Treatment: (1) Palliative; (2) Operative.
6. Cancer of the prostate.
   (a) Diagnosis.
   (b) Treatment:
      (1) Radium applications.
      (2) Operation: Conservative, Radical.

III—**Diseases of the Bladder:** Symptoms and Treatment. (Illustrated by lantern slides.)
1. The anatomy and physiology of the bladder.
2. Malformations of the bladder: diverticula, multiple bladders, fistulae, etc.
3. Disturbances of urination:
   (1) Mechanical obstructions;
      (a) Hypertrophy of prostate.
      (b) Contracture of vesical neck.
      (c) Median bar.
      (d) Hypertrophy of the trigone.
      (e) Tumors.
      (f) Stones, foreign bodies, etc.
   (2) Incontinence;
      (a) Nocturnal enuresis.
      (b) Parodoxical incontinence (C. N. S.).
      (c) Impaired vesical sphincters.
   (3) Infections (cystitis);
      (a) Acute, subacute and chronic.
      (b) Ulcerative and interstitial.
      (c) Tuberculous.

IV—**Diseases of the Kidney and Ureter:** Symptoms and Treatment. (Illustrated by lantern slides.)
1. The surgical anatomy and physiology of the kidney and ureter.
2. Congenital malformations.
3. Traumatic injuries.
4. Hydronephrosis.
5. Movable kidney.
6. Stones, tumors, etc.
7. Pyogenic infections: Pyelitis, Pyelonephritis, etc.
8. Tuberculous.
9. Kidney impairment (back pressure from prostate, etc.).
10. Kidney suppression (anuria).

"The Cornell Pay Clinic may not have employed a press agent, but the publicity achieved by it was very impressive. The arguments advanced to justify the establishment of such a clinic are of the most specious character, and assume first of all that the medical profession is composed of morons.

"Sometimes one does wonder, we are bound to confess, whether the aforesaid assumption is not the correct one."—From The Medical Times, January, 1922.

I pity no man because he has to work. If he is worth his salt, he will work. I envy the man who has a work worth doing, and does it well. There never has been devised, and there never will be devised, any law which will enable a man to succeed save by the exercise of those qualities which have always been the prerequisites of success—the qualities of hard work, of keen intelligence, of unflinching will.—Theodore Roosevelt.

COUNTY SOCIETIES

Alameda County Medical Association (reported by Dr. C. L. McVey, secretary)—The society met December 19, 1921, in the Oakland Health Center. Q. O. Gilbert, M. D., read a paper on "Some Technical and Therapeutic Considerations in Blood Transfusions." He briefly reviewed the history of blood transfusion, emphasizing the points in technic of interest in relation to present procedures.

Special emphasis was laid upon the selection of a donor, and the necessity, not only of grouping the donors and patients, but also that it is quite essential to test the donor and donee directly against each other, even though they are of the same group. The condition of para iso haemagglutins was discussed.

While the usual conditions for transfusion were discussed, special emphasis was placed on the use of transfusions to combat the toxemia and anemia occurring in acute infections. The author considers the whole blood transfusion without the use of anti-coagulants the best.

C. O. Edwards, D. D. S., read a paper on "The Method of Rebuilding the Muscles of Facial Expression After the Loss of Natural Teeth." Lantern slides served to illustrate the important points in the paper. Before the operation of extraction of teeth is performed, measurements of the face should be on record. Measure in millimeters the distance from the chin to nose, from chin to center of pupils of the eyes, from cutting edge of upper incisor teeth to pupils of the eyes, and from lower edge of upper lip to eyes. The next step is to make a templet from a heavy card, mark and cut out to fit over forehead, nose, lips and chin at the median line, so that the muscles of the face can be accurately re-established. A line is now drawn on the natural teeth to mark the position of the lip at rest, when speaking, smiling and laughing. The next step is to take plaster impressions like those used by orthodontists, of the upper and lower teeth. After operating, the natural teeth are sterilized and placed in these impressions and a model made giving us the original in the same relative position as they were in the mouth.

The patient should exercise the muscles of the face frequently. Artificial dentures should be completed and worn within from one to three weeks after the extraction.

The society is proposing a change in the constitution relative to the election of applicants to the society, to read as follows:

Article IV, Section 1. Every legally registered physician having resided and practiced in Alameda County for one year next preceding the date of making application who is of good moral and professional standing, and who does not support or practice or claim to practice any exclusive system of medicine, shall be eligible for membership.

The following officers were elected for the ensuing year: Dr. E. E. Brinckerhoff, president; Dr. Pauline S. Nusbaumer, vice-president; Dr. C. L. McVey, secretary-treasurer.

Alameda County Medical Association—Officers for 1922: President, Dr. E. E. Brinckerhoff; vice-president, Dr. Pauline Nusbaumer; secretary-treasurer, Dr. C. L. McVey; councillors—Dr. L. P. Adams, Dr. Daniel Crosby, Dr. A. M. Smith, Dr. A. M. Meads, Dr. G. G. Reinle, Dr. W. H. Strietmann; delegates—Dr. C. L. McVey, Dr. P. S. Nusbaumer, Dr. W. H. Strietmann; alternate delegates—Dr. L. P. Adams, Dr. W. A. Clark, Dr. C. A. De Puy, Dr. R. A. Glenn, Dr. Gertrude Moore, Dr. C. W. Page.

Fresno County Medical Society (reported by Dr. Thos. F. Madden, secretary)—The January meeting, which was the annual meeting, resulted in the election of the following officers for the year 1922: President, Dr. G. W. Walker; first vice-president, Dr. F. J. Tillman; second vice-president, Dr. A. D. Ellsworth; secretary, Dr. Thos. F. Madden; treasurer, Union National Bank of Fresno; assistant secretary, Dr. F. K. Pomeroy; Board of Governors, Dr. D. H. Trowbridge; delegates, Drs. J. R. Walker, W. W. Cross, H. J. Craycroft; alternates, Drs. J. H. Pettis, Guy Manson, A. B. McConnell.

Dr. Edmund Butler of San Francisco presented the subject of "Brain Injuries—Mechanics—Prognosis and Treatment." Drs. Clinton Collins, F. J. Tillman, L. P. Fleming and D. H. Ransom joined in the discussion of the subject.

The society expressed in the form of a resolution the deep regret of its members at the death of Dr. A. R. Nicholson on December 18. The sympathy of the society was extended to the bereaved family, and a copy of the resolution placed upon the society's minutes. Dr. Nicholson was one of the pioneer members of the Fresno County Medical Society, took an active interest in its welfare and the welfare of the community in which he served as a beloved physician.

The surgical staff of the Fresno County Hospital is holding bi-monthly meetings, each meeting conducted by a different member of the staff. Some of the meetings are devoted to bedside clinics, and all are working for the good of the profession, hospital and the public.

Merced County Medical Society (reported by Brett Davis, M. D., secretary)—The regular monthly meeting for January was held in the office of the secretary. There were seven members of the society present and two visitors. Roland B. Tupper, M. D., of the Fresno County Society presented a paper on "Basal Metabolism and the Thyroid Gland."

The improved appearance of the California State Journal of Medicine and the increase in value of its medical literature was the cause of comment by members of the society.

Wm. C. Cotton, M. D., has been appointed County Health Officer of Merced County to succeed J. L. Mudd, M. D., who has resigned.

Monterey County (reported by Dr. T. C. Edwards, secretary)—At the annual meeting held January 7, 1922, the following officers were elected for the year 1922: President, Chas. T. Bullard, M. D., King City; vice-president, Geo. A. Starbird, M. D., Soledad; secretary, T. C. Edwards, M. D., Salinas; treasurer, John A. Beck, M. D., Salinas; delegate to the State Meeting, Henry J. Koenecke, M. D., Salinas; alternate to the State Meeting, W. R. Reeves, M. D., Salinas.

The History of Medicine—Dr. C. D. Ball of Santa Ana is writing a history of the pioneer physicians of Orange County. The council of the State Medical Society is interested in securing histories of this type of the organizers of medicine by counties throughout the State of California. Any physician who wishes to handle this matter for his own county is requested to communicate with the State secretary.

Riverside County Medical Society (reported by Thomas A. Card, M. D., secretary)—The January meeting was held in the Chamber of Commerce rooms with twenty-six members and sixteen guests present, and twenty members absent.

The site for the new Community Hospital has been definitely chosen, and it is the purpose of the directors to begin building very soon.

W. B. Wells, M. D., has resigned as City Health Officer, and his successor has not been appointed.

Ethel Watters, M. D., of the State Board of Health, in conjunction with the Well Baby Conference, is arranging to hold a series of clinics in various towns to which mothers may bring their babies for examination. Talks to mothers on the care of babies and proper diet will be given. Patients who need medical advice will be referred to their family physician.

The Department of Hygiene of Riverside County is working in conjunction with the physicians of various towns in an effort to make medical examinations of all school children. The Department of Hygiene proposes to install the hot school lunch routine; teach health in schools as part of the daily program; to interest the children in the lives of great physicians, and acquaint them with quarantine laws and health regulations.

A newspaper clipping from Riverside quotes the Medical Society as making an effort to secure the services of a full-time health officer for Riverside County.

Sacramento County (reported by Dr. G. J. Hall)—The annual meeting of the Sacramento Society for Medical Improvement was held on Tuesday, December 20.

An amendment to the Constitution and By-laws was passed. Dr. G. J. Hall was re-elected secretary. Six directors were elected for the coming year, as follows: Drs. Schoff, Howard, Dillon, Foster, Pope and Henderson. Delegates to State Society, E. C. Turner and E. T. Redison, Jr. Two alternates were elected in the persons of Drs. James and Drysdale. One member of executive committee to be elected; result, Dr. S. E. Simmons re-elected.

The annual dues were changed from $12 a year to $15 in order to send the secretary to all State Medical meetings in the future. Carried.

At a special meeting called January 4, 1922, for the election of a president and vice-president, Dr. G. P. Dillon was elected president and Dr. B. F. Howard, vice-president, by the board of directors.

San Bernardino County Medical Society (reported by Dr. E. J. Eytinge, secretary)—The January meeting was held at the County Hospital with thirty members and ten visitors present and forty-one members absent. Doctors W. A. Jones, W. S. Davis and C. Van Zwalenburg discussed the "Eary Diagnosis of Intussusception." Dr. C. P. Thomas of Los Angeles presented the subject of "The Treatment of Cancer of the Anus, Rectum, and Colon." Discussions of these papers were opened by Dr. C. G. Hilliard and Dr. P. M. Savage. The staff of the County Hospital exhibited and discussed a number of clinical cases.

San Francisco County Medical Society (reported by Dr. LeRoy H. Briggs, secretary)—The annual meeting of the society was held on December 13, when the following officers were elected: President, Dr. Saxton Pope; first vice-president, Dr. Rene Bine; second vice-president, Dr. Mary E. Botsford; secretary-treasurer, Dr. LeRoy H. Briggs; librarian, Dr. Leo Eloesser; directors, Drs. Rene Bine, W. W. Boardman, W. R. P. Clark, H. W. Gibbons, Sol. Hyman, Wm. Ophuls, R. K. Smith; delegates, Drs. W. C. Alvarez, M. O. Austin, W. W. Boardman, Leo Eloesser, G. H. Evans, W. S. Franklin, H. P. Hill, Sol. Hyman, E. S. Kilgore, Lovell Langstroth, Howard Morrow, Wm. E. Stevens, W. I. Terry, V. G. Vecki, C. F. Welty; alternates, G. G. Moseley and Harry Spiro.

The scientific program of the annual meeting included a paper on "Etiology and Treatment of Asthma in Children," by Dr. A. H. Moore, and "Nose and Throat Pathology as Etiological Factors in Asthma," by Dr. E. C. Sewall. These papers were discussed by Drs. A. J. Houston, S. H. Hurwitz, C. F. Welty, Sanford Blum and P. H. Pierson.

At a special meeting held on December 30, Dr. Julius Rosenstirn addressed the society on "The Relation of Parasitic Infection to the Growth of Cancer in Animals."

San Francisco County Medical Society—President Saxton Pope and Secretary LeRoy H. Briggs have issued the following circular to all physicians in San Francisco:

"The Medical Society is a private, voluntary organization. It is an association in which the best medical men should be. It stimulates the mind to greater effort and to raise medical standards, both ethically and scientifically. Active membership in the Medical Society wears off the sharp edges of professional jealousy; through it one becomes respectful of his professional brother—discovering the good points of the other man. An active part in the Medical Society will make a more liberal and diligent student, practitioner, or leader. The association of medical minds promotes initiative in research work and the exchange of ideas. Membership in the Medical Society popularizes progressive and medical thought. The medical men are so highly specialized, that if they cannot bring themselves into a harmoniously organized group for study, no one can do it for them. Having chosen association with such a group, there is no question but that the affiliation gives prestige in return."

San Diego County Medical Society (reported by Dr. Robert Pollock)—The annual dinner of the Medical Society was held at the San Diego Hotel on the evening of December 13, 1921. After an enjoyable banquet the president announced the results of the election of officers for 1922:

President, W. W. Crawford, M. D.; vice-president, J. F. Churchill, M. D.; secretary, Geo. B. Worthington, M. D.; treasurer, C. L. Stealy, M. D.; for councillors, M. H. Arnold, M. D., J. E. Jennison, M. D., H. A. Thompson, M. D.; for delegates, C. M. Hosmer, M. D., T Coe Little, M. D., J. C. Yates, M. D.; for alternates, J. C. E. Nielsen, M. D., E. H. Crabtree, M. D.; for Milk Commission, Frances M. Allen, M. D., R. A. Kocher, M. D.; directors of the medical library, M. H. Arnold, M. D., F. A. Burton, M. D., T. Coe Little, M. D., H. P. Newman, M. D., Robt. Pollock, M. D., L. H. Redelings, M. D., P. C. Remindino, M. D., C. L. Stealy, M. D., H. A. Thompson, M. D., C. H. McConaughy, D. D. S., H. L. Murdock, D. D. S., Guy V. Smith, D. D. S.; secretary-treasurer, C. L. Stealy, M. D.

The January meeting was devoted to the reports of the retiring officers and the installation of the officers for 1922. Humorous case reports were made by men of eminence in the profession.

San Diego members are planning to attend the Yosemite meeting of the State Society in liberal numbers.

Group Medicine: One of the recent meetings of the San Diego County Medical Society was devoted to the discussion of Group Medicine. The subject was discussed by Drs. Donald Frick, Charles D. Lockwood, H. A. Johnston and others. A rather full report of this meeting will be found in Vol. 7, No. 19 of the Bulletin of the San Diego County Medical Society. Persons particularly interested in the subject should read this Bulletin.

San Joaquin County Medical Society; Annual Meeting (reported by Dr. Dewey R. Powell, secretary)—The annual meeting of the San Joaquin County Medical Society was held in the White Room of the Hotel Stockton on Friday evening, December 9, at 7 o'clock, at which time a delightful dinner was served and the members enjoyed the first social evening held by the Medical Society in many years. The following members were elected directors for the ensuing year:

Dr. C. R. Harry, Dr. F. P. Clark, Dr. R. T.

McGurk, Dr. J. D. Dameron, Dr. L. R. Johnson, Dr. B. J. Powell, Dr. D. R. Powell, Dr. Hudson Smythe and Dr. Margaret Smythe. The following officers were chosen from the board of directors: Dr. Hudson Smythe, president; Dr. J. D. Dameron, first vice-president; Dr. Margaret Smythe, second vice-president, and Dr. Dewey R. Powell, secretary and treasurer.

Dr. Saxton Pope, Assistant Clinical Professor of Surgery at the University of California and president-elect of the San Francisco County Medical Society, spoke on "Hunting Wild Game with the Bow and Arrow," and illustrated his remarks by numerous lantern slides. He told of his first interest with the bow and arrow, due to his association with the Indian Ishi, the last of the Yani tribe, and how he had been taught by Ishi both to shoot and to hunt. He showed slides of various types of wild game, such as squirrels, quail, wildcats, mountain lions and deer which had been brought down by the bow and arrow, and vividly described his hunt in Yellowstone Park, where he and his companions secured five grizzly bears, including one 1000-pound bear known as the largest in the United States.

The social nature of the annual meeting was voted quite a success and it was the consensus of opinion that the society should hold at least one social evening each year.

Santa Clara County Medical Society (reported by Dr. J. L. Pritchard, secretary)—The December meeting was the annual business meeting of the society. The following officers were elected for 1922:

President, R. T. Wayland; first vice-president, F. S. Ryan; second vice-president, R. G. Reynolds; third vice-president, Jonas Clark; treasurer, H. C. Brown; secretary, E. P. Cook; councillors, J. J. Beattie, T. L. Blanchard, C. E. Saunders; delegates, G. L. Barry, C. Wayland, J. H. Shephard, C. E. Saunders; alternates, J. S. Staub, D. Wilson, F. S. Ryan, G. A. Gray.

Dr. J. Underwood Hall was transferred to San Francisco and Dr. Chas. W. Delaney transferred to Altoona, Pennsylvania.

The O'Connor Sanitarium was recently overhauled, the laboratory adding all necessary equipment to do first-class work. The hospital has also provided a record room and installed a record clerk.

Santa Cruz County Medical Society; Annual Meeting (reported by Dr. James Cutter)—The annual meeting of the Santa Cruz County Medical Society was held December 17 with nine members present. The officers elected for the ensuing year were: Dr. H. G. Watters, president; Dr. Stanley Dowling, first vice-president; Dr. James B. Cutter, second vice-president, Dr. A. N. Nittler, secretary and treasurer; Dr. P. T. Phillips, delegate to the State Society; Dr. E. Lee Burch, alternate; Dr. J. B. Cutter, corresponding editor; Dr. S. C. Rodgers, censor for 1924.

Dr. Cothran discussed "The Effects of Alcohol Upon the Gastric Mucosa and the Cerebral Cortex of Rats."

It was voted to hold future meetings every three months at Watsonville.

Stanislaus County (reported by Dr. E. F. Reamer, secretary)—The annual meeting was held on December 15 at the Modesto Hotel. The usual annual dinner and business meeting were held and no scientific papers were presented. There were fifteen members present and twnty-three absent, the large number of absentees being explained by the disagreeable weather. The following officers were elected for the ensuing year:

President, Dr. A. M. Field; vice-president, Dr. J. K. Ransom; secretary-treasurer, Dr. R. E. Maxwell; censor three years, Dr. F. R. DeLappe; delegate to State Society meeting, Dr. E. F. Reamer; alternate, Dr. John A. Cooper.

Certain members of the society requested information as to the advisability of changing their by-laws so as to require six months' residence before a candidate shall be eligible for active membership.

Note: The answer from the State Society is as follows: It seems to be the general opinion among our most experienced men that a time limit is not adequate as a safeguard and is not necessary when more thorough investigation is made prerequisite to membership. It is suggested that if a change in the by-laws is to be made, a better change would be to provide that no physician could be elected to active membership in any county society until his application, in addition to the usual procedure, had received the certificate of his licensure and creditable standing with the State Board of Medical Examiners and the approval of the State Society office, which carries with it a review of the records of the A. M. A. headquarters in Chicago.

NOTICES

SECTION ON ANESTHESIOLOGY OF THE CALIFORNIA STATE MEDICAL SOCIETY AND THE PACIFIC COAST ASSOCIATION OF ANESTHETISTS.

By Eleanor Seymour, M. D., Secretary-Treasurer, 1329 South Grand Ave., Los Angeles.)

The Pacific Coast Association of Anesthetists will hold its first Scientific Meeting at Yosemite Park, Monday and Tuesday, May 15-16, 1922, in conjunction with the meeting of the Section on Anesthesiology of the California State Medical Society.

A splendid scientific program of pertinent papers is in the making for this occasion and the sessions will offer those in attendance every opportunity to acquire an intimate knowledge of what is best in the science and practice of anesthesia.

The Pacific Coast Association of Anesthetists was founded at Coronado in May, 1921, through the united efforts of the Southern and Northern California Societies of Anesthetists and other interested anesthetists of the Pacific Coast and Rocky Mountain States. At that time the constitution was adopted and officers for the first scientific meeting were elected.

Membership in the Pacific Coast Association of Anesthetists is open to all licensed and qualified members of the medical and dental professions, as well as to research workers holding doctorates of similar standing, who are interested in advancing the specialty of anesthesia.

The meeting will be held at Yosemite Park, and as a large attendance is expected you are advised to make your reservations now. You are afforded an opportunity of a wonderful sightseeing trip, as well as an unusual scientific meeting.

If you wish to present a paper during the meeting or section, kindly notify the secretary at once, giving the title and brief abstract of same.

Send for and fill in the details of a membership application and return it with your check or money order for the annual dues ($5), so that your membership card may be sent you in advance of the meeting. Also be sure and send the names and

addresses of as many prospects for membership as you may know of.

Details regarding the annual dinner of the association and other entertainments will be sent later with the preliminary program.

The following officers and executive committee will be in charge of the Yosemite meeting: George P. Waller, president; Mary E. Botsford, vice-president; Eleanor Seymour, secretary-treasurer; executive committee—Walter R. Crane, Caroline B. Palmer, R. L. Charles, D. E. Hoag, L. H. Maxson and Louise A. Oldenbourg.

The officers and executive committee will do everything they can to make this meeting interesting, instructive and enjoyable. Your cordial cooperation and support are solicited in launching the Pacific Coast Association of Anesthetists and the Section on Anesthesiology on successful careers for the benefit of all concerned.

This is an opportunity for all anesthetists of the Pacific Coast and Rocky Mountain States to find out what their associates know about the specialty of anesthesia and to exchange researches and clinical experiences, for the benefit of their specialty and in the interest of better surgery.

Industrial Accident Work—The Industrial Accident Commission under date of December 7 have issued a form letter to all physicians in the State, giving details regarding the requirements of the law and of the Industrial Accident Commission in the discharge of their duty. This letter is too long for publication in the Journal, but every physician engaged in work of this character and who has not already received a copy is advised to write to the Industrial Accident Commission for one. Particular attention is called to Section 53 of the Industrial Accident law, which reads in part as follows: "Every physician or surgeon who attends any injured employe, is hereby required to file with the commission, under such rules and regulations as the commission may from time to time make, a full and complete report of every injury to an employe arising out of or in the course of his employment and resulting in loss of life or injury to such person."

Popular Medical Lectures of Stanford Medical School—The fortieth course of these popular lectures will be given at Lane hall as follows: January 13, "The Basis of Modern Medicine," by Dr. William Ophuls; January 27, "The Attitude of the Public Toward the Blind," by Miss Katherine Foley; February 10, "The Treatment of Deformities Following Infantile Paralysis," by Dr. Arthur L. Fisher; February 24, "The Control of Botulism," by Dr. E. C. Dickson; March 10, "The Truth about Vivisection," by Mr. Ernest H. Baynes; March 24, "Present Day Methods of X-ray Diagnosis," by Dr. W. Edward Chamberlain.

Research in Homeopathic Medicine—The California State Homeopathic Medical Society has appointed Dr. R. W. F. Winnard, Dr. Milton A. Barndt, Dr. Edward P. Clark, Dr. George H. Martin, Dr. Robert F. Knoll, Dr. James D. Miller, Dr. F. H. Cookinham, Dr. Edgar H. Howell, Dr. Marion B. McAulay, Dr. Joseph Pollia and Dr. Henry L. Stambach as a committee on research for the California State Homeopathic Society.

The Western Section of the American Laryngological, Rhinological and Otological Society (reported by Dr. Grant Selfridge).—This section will hold a meeting in the San Francisco County Medical Society rooms on February 23. The morning will be devoted to surgical clinics at Stanford Hospital, and the afternoon to the discussion of scientific papers.

GENERAL SESSION AND SECTION OFFICERS FOR THE 1922 MEETING OF THE STATE SOCIETY

The list of the officers of the general sessions and the various sections of the State Society is published below, so that members desiring to contribute papers may have the names and addresses of the proper officers of the section in which they are interested. Members desiring to present papers should communicate without delay with the chairman and secretary of the appropriate section, because the program is getting well under way and will be closed and go to press the first week in February.

The Secretary of the State Society, as chairman of the General Program Committee, invites correspondence and suggestions regarding any phase of the 1922 program.

GENERAL SESSIONS

Chairman, Dr. John H. Graves, President of the Society, 977 Valencia Street, San Francisco.
Secretary, Dr. W. E. Musgrave, Chairman of the Program Committee, 912 Butler Building, San Francisco.

SECTION ON TECHNICAL SPECIALTIES

Chairman, Dr. Ray Lyman Wilbur, President Stanford University.
Secretary, Dr. Charles T. Sturgeon, Merritt Building, Los Angeles.

SECTION ON MEDICAL ECONOMICS, EDUCATION AND PUBLIC HEALTH

(League for the Conservation of Public Health)

Chairman, Dr. Dudley Smith (President League for the Conservation of Public Health), Thomson Building, Oakland.
Secretary, Dr. W. T. McArthur (Secretary League for the Conservation of Public Health), Security Building, Los Angeles.

SECTION ON INDUSTRIAL MEDICINE AND SURGERY

Chairman, Dr. E. W. Cleary, 177 Post Street, San Francisco.
Secretary, Dr. Packard Thurber, 906 Black Building, Los Angeles.

SECTION ON RADIOLOGY

(Roentgenology and Radium Therapy)

Chairman, Dr. Albert Soiland, 527 West Seventh Street, Los Angeles.
Secretary, Dr. H. E. Ruggles, Butler Building, San Francisco.

SECTION ON PATHOLOGY AND BACTERIOLOGY

Chairman, Dr. William Ophuls, Stanford University Medical School, San Francisco.
Secretary, Dr. Roy W. Hammack, Brockman Building, Los Angeles.

SECTION ON GENERAL MEDICINE

Chairman, Dr. Joseph M. King, Brockman Building, Los Angeles.
Secretary, Dr. E. S. Kilgore, 391 Sutter Street, San Francisco.

SECTION ON PEDIATRICS

Chairman, Dr. William Palmer Lucas, University Hospital, San Francisco.
Secretary, Dr. Hugh K. Berkley, Brockman Building, Los Angeles.

SECTION ON NEUROPSYCHIATRY

Chairman, Dr. Walter F. Schaller, 909 Hyde Street, San Francisco.
Secretary, Dr. W. B. Kern, Brockman Building, Los Angeles.

SECTION ON GENERAL SURGERY

Chairman, Dr. Charles D. Lockwood, 295 Markham Place, Pasadena.
Secretary, Dr. Edmund Butler, Butler Building, San Francisco.

SECTION ON EYE, EAR, NOSE AND THROAT

Chairman, Dr. Frank A. Burton, Watts Building, San Diego.
Secretary, Dr. Harvard McNaught, Butler Building, San Francisco.

SECTION ON UROLOGY

Chairman, Dr. George W. Hartman, 999 Sutter Street, San Francisco.
Secretary, Dr. Louis Clive Jacobs, 462 Flood Building, San Francisco.

SECTION ON ORTHOPEDIC SURGERY

Chairman, Dr. W. W. Richardson, Brockman Building, Los Angeles.
Secretary, Dr. G. J. McChesney, Flood Building, San Francisco.

SECTION ON ANESTHESIOLOGY

Chairman, Dr. Mary E. Botsford, 807 Francisco Street, San Francisco.
Secretary, Dr. Eleanor Seymour, 1329 S. Grand Ave., Los Angeles.

SECTION ON GYNECOLOGY AND OBSTETRICS

Chairman, Dr. Harry M. Voorhees, Brockman Building, Los Angeles.
Secretary, Dr. L. A. Emge, Stanford University Hospital, San Francisco.

HOSPITALS

SAN FRANCISCO HOSPITAL SURGICAL CLINICS

The public surgical clinics (Colloquia) held at the San Francisco Hospital, Potrero avenue and Twenty-second street, every Thursday morning from 9:00 to 12:00, by members of the staff of the Stanford University Medical School and San Francisco polyclinic, which were omitted during the holidays, were resumed on Thursday, January 12, the clinic being given by Dr. Emmet Rixford.

A Case of Spiral Fracture of the Humerus from Throwing a Baseball.

Dr. Rixford stated he had previously operated upon but one case with similar etiology, and this a number of years ago. In view of the great number of men and boys who play baseball, it is remarkable that this fracture does not occur more commonly.

Spiral fractures of the long bones are always the result of rotatory or twisting force. A right-handed twist always produces a right-handed spiral and a left-handed twist always produces a left-handed spiral. In the spiral fracture of the humerus produced by throwing a baseball, if the player is right-handed the right humerus is subjected to violent external and, therefore, left-handed torsion, uncomplicated by other forces. Here we have the purest form of spiral fracture practically without longitudinal displacement and without stripping up of the periosteum. In the typical spiral fracture the spiral fissure may extend as much as twice around the bone as was observed in the first case mentioned, the bone being finally separated into two fragments by a substantially vertical fracture uniting two adjacent limbs of the spiral. The periosteum is torn along the spiral part of the fracture, but not along the vertical component, because as the bone breaks it folds upon the vertical part of the fracture as on a hinge. For this reason, and in view of the form of the fracture lines and surfaces, it is evident that if the fracture is accurately reduced the bones fit together with mathematical nicety and considerable firmness, stability being lacking only in the direction of the rotation which produced the fracture. Therefore, if a splint can be so applied as to resist this rotation, displacement will not recur.

Since it is practically impossible to adjust such a fracture with such a degree of nicety as will secure the stability as above described without open operation, it is logical to treat all such fractures, except in young children, by the open method, unless there is some contraindication to operation in general.

In the operation, the aim should be to identify and locate the spiral element of the fracture, to cut down upon it, remove chips of bone, bits of muscle, fascia, etc., which interfere with accurate reduction; drill the bones at points which will be horizontally opposite each other across the spiral after reduction, passing a single silver wire, reducing the fracture and tightening the wire. This may be done in most instances without disturbing the periosteum in the least, and without producing more than a minimum of traumatism of the soft parts.

In the typical spiral fracture there is, therefore, no necessity of implanting large foreign bodies, Lane or other plates, screws, etc. The risk of infection, which is practically the only objection to operation in such cases, is minimized by this technique; specifically, by avoidance of unnecessary truama, stripping up periosteum, and implantation of more than a minimum of foreign material. Silver wire has on its part some antiseptic capacity, and is readily incorporated in the bone and almost never requires to be removed. It is much more reliable than kangaroo tendon.

The above facts and procedures were illustrated by the case in hand. After dressing the arm it was put up in a light splint and bound to the side, the forearm flexed across the abdomen.

Another argument for the above technique in the management of spiral fracture of the humerus, is the fact that the spiral not rarely follows the groove of the radial nerve (musculo-spiral), which nerve may most safely be protected against compression by callus, etc., by such an operation. If advisable, as it may be in some cases, a layer of fascia or muscle can be interposed between the nerve and the line of the fracture. If adjustment of the fracture is mathematically perfect, very little callus will be thrown out or will be required.

Tumor on the Right Side of the Neck, Just Above the Clavicle—Case for Diagnosis.

A man of sixty-three, beginning to lose flesh, somewhat below par in health and vigor, presented a tumor of rapid growth, the size of a man's fist, beneath the sterno-mastoid muscle, lateral to the great vessels, free from the clavicle, not evidently pulsating; not affecting the pulsation in the radial artery nor interfering with the venous or lymphatic return from the arm. No apparent engorgement of veins of the head; no interference with pulsation of carotid or temporal arteries; no interference with sensation or motion in the arm. The tumor was evidently infiltrating, attached to the deeper structures of the lateral aspect of the neck. No fever, growth not tender.

Malignant or inflammatory goiter ruled out by the position of the tumor lateral to the carotid artery; age of patient, absence of pre-existing goiter. Hodgkins' disease and lympho-sarcoma ruled out by the fact that the tumor was single and not multiple; fixed and not movable; blood picture normal. Absence of lymphomata in axilla, opposite side of the neck, etc. History of continuous enlargement of the growth without intermission such as is commonly present in Hodgkins' disease; also absence of intermitting fever; blood Wassermann negative.

If carcinoma, the primary tumor was most likely to be found in the œsophagus, lung, or some abdominal organ.

Carcinoma of the lung seemed unlikely, because of the absence of cough, sputum, and pulmonary signs. Aneurism excluded by the absence of pulsation in the tumor; absence of pain; as from bone erosion or pressure on nerves; absence of interference with pulsation in radial artery; absence of evidence of bronchial compression; rasping cough, stenotic breathing, etc.

Carcinoma of the abdominal organs only rarely gives rise to metastatic tumors in the right side of the neck.

The clinical history was completely negative as to symptoms of carcinoma of the stomach, gall-to œsophagus and larynx. Voice normal; deglutibladder or intestine; also negative with reference tion also normal.

In view of the above, the most probable diagnosis was carcinoma of the lymph glands of the neck, secondary to primary tumor in the œsophagus, but œsphogoscopy, by Dr. H. B. Graham, showed the entire œsophageal mucous membrane to be free from ulceration or tumefaction.

Fluoroscopy, by Dr. Chamberlain, showed the œsophagus to be normal in form and motility except for a lateral deviation in the upper chest, where plates showed an indefinite shadow suggesting mediastinal tumor slightly displacing the œsophagus.

Exploratory incision, lifting off the sterno-

mastoid muscle, showed the tumor to be infiltrating and completely obstructing the jugular vein. The finger introduced beneath the clavicle and sternum showed the tumor to be free from the anterior chest wall and clavicle. It showed also an extension of the tumor downward into the chest beyond the reach of the finger.

The major portion of the tumor of the neck was then cut away, including the obliterated portion of the jugular vein. The pneumogastric nerve was found to be surrounded by tumor. It had evidently not been compressed sufficiently to interfere with motor function of the larynx.

On cross section, the tumor appeared to be sarcoma, possibly of fascial origin, but contained large areas of yellowish necrosis. Histological examination of the tumor by Dr. Ophuls showed the tumor to be carcinoma (malignant epithelioma), its origin not determined.

St. Joseph's Hospital of San Francisco announces improvements—Plans have been completed for the early construction of a new hospital of 300 beds. Staff organization has been provided with Dr. A. S. Musante as chief of the staff; Dr. W. C. Mackintosh, vice-president; Dr. L. Overstreet, secretary; Dr. F. C. Keck, treasurer; Drs. C. E. Taylor, Wm. Quinn, P. Collischonn, T. I. Janes, A. S. Musante and Wm. Mackintosh, executive council.

Children's Department of the Santa Barbara Cottage Hospital—The Cottage Hospital in Santa Barbara is in receipt of a gift of $50,000 for the establishment of a Children's Ward, and Mr. Knapp announces that he is going to raise additional money to build a new Nurses' Home for the hospital shortly.

Santa Barbara Cottage Hospital Clinic Day—Recently the Cottage Hospital staff carried out a whole day of intensive review and clinics, with a large number of physicians present. During the morning Surgical Clinics included five laparotomies by various members of the staff; the nose and throat men provided demonstrations and operations; an hour was given to demonstrations of X-ray work and of radium therapy; and the Chemical Laboratory demonstrated various blood chemical methods. Luncheon was served in the hospital. During the afternoon a medical program was given consisting of papers or clinical demonstrations by ten medical men of the staff. Some of the material presented consisted of cases or post-mortem specimens, and lantern slides of congenital syphilis, diabetic gangrene treated with sodium citrate; leprosy, heart block and linitis plastica. Also, during the afternoon major surgical procedures and operative eye work were carried on. The day closed with a banquet by the Santa Barbara County Medical Society to which the visitors were invited.

A Clinic Day of this character acquaints the various members of the staff with the work of their colleagues, serves as a decided stimulus for each man to improve the character and the technique of his work; it demonstrates the fact that even in smaller communities, good work over a considerable range of subjects is being done, and it further promotes a spirit of harmony and of team play among the members of the staff, which shows itself repeatedly in the every-day routine of hospital work.

The success of this undertaking by the staff of the Cottage Hospital and the compliments received from the physicians from various parts of the county who were present, is such, that they are already looking forward with enthusiasm to putting on a similar program within the coming year.

BOOKS RECEIVED

History of Medicine, With Medical Chronology, Suggestions for Study and Bibliographic Data, by Fielding H. Garrison, M. D., Lieutenant-Colonel, Medical Corps, U. S. Army, Surgeon-General's Office, Washington, D. C. Third Edition, Revised and Enlarged. Octavo of 942 pages with 257 portraits. W. B. Saunders Company, Philadelphia and London, 1921. Cloth, $9 net.

1920 Collected Papers of the Mayo Clinic, Rochester, Minn. Octavo of 1392 pages, 446 illustrations. Philadelphia and London: W. B. Saunders Company. Cloth, $12 net.

Pediatrics and Orthopedic Surgery. Practical Medicine Series. Edited by Edwin W. Ryerson, M. D., with the collaboration of Robert O. Ritter, M. D. Chicago: The Year Book Publishers. 1921.

Vice and Health (Problems, Solutions). By John Clarence Funk, M. A., LL. B. Philadelphia and London: J. B. Lippincott Company.

The Blood Supply to the Heart in its anatomical and clinical aspects. By Louis Gross, M. D., C. M. With an introduction by Horst Oertel. Twenty-nine full page plates and 6 text illustrations. New York: Paul B. Hoeber.

The Glands Regulating Personality. A study of the glands of internal secretion in relation to the types of human nature. By Louis Berman, M. D. New York: Macmillan Company. 1921.

Medical Clinics of North America. Volume V, Number 3 (November, 1921). Philadelphia Number. Published bi-monthly (six numbers a year), by W. B. Saunders Company, West Washington Square, Philadelphia. Price per year, $12.

Pathogenic Micro-organisms, a Practical Manual for Students, Physicians and Health Officers. By W. H. Park and A. W. Williams, assisted by C. Krumwiede, Jr. Seventh edition. Philadelphia and New York: Lea & Febiger. 1920. Price, $6.

The seventh edition of Pathogenic Micro-organisms, by Park and Williams, assisted by Krumwiede, maintains the high standard of previous editions as a book of reference and contains much of the more recent advances in laboratory technic and diagnosis.

The Surgical Clinics of North America (Issued serially, one number every other month), Volume I, Number 6 (The New York Number) 295 pages, including complete Index to Volume I and 122 illustrations. Per clinic year (February, 1921, to December, 1921). Paper, $12 net; Cloth, $16 net. Philadelphia and London: W. B. Saunders Company.

The Medical Clinics of North America, Volume V, Number 3 (The Philadelphia Number, November, 1921). Octavo of 362 pages, 44 illustrations. Philadelphia and London: W. B. Saunders Company, 1921. Published bi-monthly. Price per clinic year: Paper, $12; cloth, $16.

BOOK REVIEW

Operative Gynecology. By Harry Sturgeon Crossen. 699 pages, 834 illustrations. St. Louis: C. V. Mosby Company. 1920.

This book, already well known to those interested in this field of surgery, now appears in its second edition, enlarged and revised. Few, even those conversant with the literature of the subject, have probably realized the number and variety of operative processes suggested for gynecological conditions until they looked over a work like the present one, which speaks not only for the industry of the author, but likewise for his sagacity and broad grasp of this field of surgery. We know of no other work of such magnitude. It is both a work of reference and a handbook of practice.

Operative procedures have been carefully classified in relation to the anatomical structures involved; this is especially true of those for prolapse of the uterus and bladder, and retrodisplacement of the uterus. Particular attention has also been given to the consideration of the choice of operative procedures with reference to the pathological condition present; this is one of the most noteworthy and commendable features of the work. Detailed analysis of the merits of operative procedures has been fully developed; their indications and limitations carefully explained; and the technical steps fully described. The range of subjects covered in this volume includes about the whole province of operative gynecology, including chapters on certain fundamental disturbances, postoperative handling, and medico-legal questions. The book abounds with numerous good and well selected illustrations, very clearly illustrating the various steps in the various operations.

A. J. L.

Tuberculosis and How to Combat It. By F. M. Pottenger. 273 pages. St. Louis: Mosby Company. 1921.

The above book is a very comprehensive presentation of the whole subject of tuberculosis from the patient's point of view. It answers in understandable language the numerous questions which the patient is constantly asking his medical adviser. The author devotes several chapters to the incidence and etiology of tuberculosis and then explains to the patient the various symptoms and method of treatment. He lays particular stress upon the necessity of a rational co-operation between patient and doctor if results are to be obtained, explaining the pathology of the disease and the reasons for methods advised in language which convinces but does not frighten the patient. The author's views on marriage of tuberculous patients are commendable because, "No matter whether they should or should not, some of them will." He, therefore, proceeds to explain under what conditions a tuberculous patient may marry, the disadvantage, but in certain cases the advantage.

Pottenger's book is one of the best popular versions of tuberculosis of the many already published and may be recommended to all patients afflicted with this disease. At the same time, the medical man will find its perusal very much worth his while.

W. C. V.

Principles of Medical Treatment. By Geo. Cheever Shattuck. 5th ed. Boston: W. M. Leonard. 1921.

It is a pleasure to note the appearance of this common sense volume. One is usually prepared to find a book of this sort resembling most others on the same subject. Ordinarily, they are of a type and consist mostly of therapeutic orthodoxy. This one, however, differs, and is a satisfactory compendium brought very thoroughly up to date. Naturally, in a volume of this size, the subject matter must of necessity be more sketchy and suggestive than complete in its discussions. Nevertheless the most important facts are all there in brief form, and the author is to be congratulated on having completed a difficult task. The chapter on medication boils down in comparatively few pages the really useful drugs in medicine, and is of really more service to the practicing physician than a pharmacopoea.

H. I. W.

DEATHS

Beebe, Charles E. Died in Woodland, Calif., December 20, 1921. Was a graduate of Vanderbilt University, Tenn., 1885; also Willamette Univ., Oregon. Licensed in California, 1889. Was a member of the Medical Society State of California.

Griffin, Jesse Ansley. Died in Huntington Beach, Calif., December 16, 1921. Was a graduate of the Baltimore Medical College, Md., 1906. Licensed in California, 1921.

Hawkes, W. J. Died in Los Angeles, December 29, 1921. Was a graduate of Hahnemann Medical College, Pa., 1867. Licensed in California, 1898.

Keating, John J. Died in San Francisco, October 31, 1921. Was a graduate of the Barnes Medical College, St. Louis, Mo., 1901. Licensed in California, 1901.

Nicholson, A. R. Died in Fresno, Calif., December 24, 1921. Was a graduate of University of Michigan, 1879. Licensed in California, 1895. Was a member of the Medical Society State of California.

Shuey, Sarah I. Died in Oakland, November 23, 1921. Was a graduate of University of California, 1878. Licensed in California, 1879. Was a member of the Medical Society State of California.

Thorwick, Martha G. (di Giannini). Died in San Francisco, November 16, 1921. Was a graduate of the College of Physicians and Surgeons, Chicago, Ill. Licensed in California, 1901.

Wright, Henry Eugene. Died in Sacramento, Calif., November 25, 1921. Was a graduate of the University of California, 1894. Licensed in California, 1894.

Dr. Annie L. Miller died on December 29, 1921, at her home in Oakland. Dr. Miller was ninety-four years old. She graduated from the Homeopathic Medical College of Cleveland, Ohio, February 26, 1869, and was licensed in California on October 19, 1882. She was a member of the Alameda County Medical Society and the California State Society.

Boone, Reunette E. Died in Santa Rosa, Calif., December 11, 1921. Was a graduate from the Medical College, Syracuse University, New York, 1881. Licensed in California, 1895, and 76 years old.

Bray, Nicholas. Died November 22, 1921, in Glendale, Cal. Was a graduate of State University, Iowa, 1885. Licensed in California, October, 1920. Age 66.

McSwegan, Daniel. Died in San Diego, December 2, 1921. Was a graduate of the Medical College of the Pacific, Calif., 1878. Licensed in California, 1878.

Streichan, Paul Herman. Died in Honolulu, T. H., recently. Age 34. Was a graduate of Stanford University Medical School, San Francisco, 1920. Licensed in California, August, 1920.

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ORIGINAL ARTICLES

TREATMENT OF THE LACERATED AND INFECTED CERVIX UTERI.*

By ALBERT V. PETTIT, M. D., San Francisco, Cal.
From the Division of Obstetrics and Gynecology, Stanford University School of Medicine, San Francisco, California.

Interest in the results following the various methods of treating infected and lacerated cervices has been stimulated largely by the work of Leonard in 1914, in his comparison of the end results in amputation and trachelorrhaphy; and further by the article of Sturmdorff in 1916, on "Tracheloplastic Methods and Results."

This report is undertaken with the idea of estimating the relative value in the treatment of infections and lacerations of the cervix in three types of operations, namely:

Actual cauterization.
Trachelorrhaphy.
Amputation.

The investigation has covered 373 cases operated upon at the Women's Clinic of the Stanford University Medical School during the past eight years. Special attention has been paid to the relief of leucorrhoea, pelvic pain, objective cure of cervical pathology and the relationship to future pregnancies.

Infection of the lower genital tract in women is limited almost entirely to the glandular structures; vulvo-vaginal, urethral and cervical. These structures when intact are immune to practically all organisms except that of gonorrhoea. Infections of the undamaged cervix is practically always gonorrhoeal at its inception. The gonococci are replaced after variable lengths of time by other organisms, the gonococci seeming to serve largely to prepare the field for other types of infection. Curtis, in 1914, showed that these secondarily infecting organisms were various strains of bacilli, diplococci and streptococci, mostly anaerobic. In the damaged cervix the soil is prepared for infection by the opening up and traumatizing of the tissues. The importance of laceration of the cervix in the incidence of its infection is indicated by the fact that in 111 cases of laceration in this series, in which a microscopical section of the cervix was examined, 66 cases or 59½ per cent, were infected.

Infection of the cervix uteri concerns the racemose glands lining the cervical canal from the external to the internal os. Microscopical examination of sections through an infected cervix shows hyperplasia in the interstitial tissue about the glands, round cell infiltration, with occasional collections resembling actual abscess formation. If the cervicitis is at all chronic there are many cysts of the glands filled with mucoid material caused by the occlusion of the gland ducts. The so-called erosions are often present, in which the columnar epithelium of the canal has replaced varying amounts of the stratified squamous epithelium of the vaginal portion of the cervix. Infection of the cervical tissues diminishes in intensity as the internal os is approached and only rarely passes this barrier, to invade the endometrium. The immunity of the endometrium is well shown in 86 cases in this series which showed microscopical evidence of cervicitis, and in which specimens of endometrium were obtained at the time of operation. Of these cases, only 12, that is 14 per cent, shows any infection of the endometrium. It is also interesting to note that of these 86 cases, 37 per cent had palpable evidence of marked pelvic inflammatory disease, showing that the usual route of infection of the internal pelvic organs is not the uterine cavity.

Lymphatic drainage from the entire mucous surface of the cervix and uterus is upward and outward throughout the musculature of the entire organ towards the serous coat. Vessels leave the uterus by way of the sacrouterine, cardinal and broad ligaments. Many fine lymph vessels traverse these structures to empty into the sacral, hypogastric and lumbar nodes. By this path, infection of the glandular elements of the cervix spreads upward and thus may involve any or all of the internal pelvic organs. This is the usual route of infection in the production of the so-called pelvic inflammatory disease.

Symptoms of laceration and infection of the cervix as generally given are numerous and varied, but aside from the objective signs of discharge and the local irritation therefrom, practically all the complaints are due to the involvement of the pelvic organs by the upward extension of infection.

There is no treatment indicated for any healed laceration of the cervix in the absence of infection. However, from the known high incidence of infection of lacerations (59½ per cent), considerable can be done in the way of prophylaxis, that is, repair of the laceration at or near the time of its inception, before infection has taken place. There has been considerable discussion as to the correct time in which to repair lacerations of

* Read before the Fiftieth Annual Meeting of the Medical Society of the State of California, Coronado, May, 1921.

the cervix; whether it should be done immediately following delivery or at some time during the first six weeks post-partum. Certainly the longer the interval between occurrence and repair of the laceration, the greater the possibility of infection. It has been urged that the benefits of immediate trachelorrhaphy are outweighed by the following disadvantages:

1. Added danger of the puerperal sepsis.
2. Odema of the tissues preventing proper coaptation of parts.
3. Free drainage of lochia prevented.
4. That the technique is difficult.

In our experience we have found none of these objections valid. In the routine exposure of the cervix after expression of the placenta in 700 consecutive cases in the Maternity Ward of the Stanford University Medical School it was found necessary to suture the cervix in 73 cases, roughly 10 per cent.

The maternal morbidity has not increased as a result of this procedure. Odema of the tissues of the cervix certainly obscures the anatomy somewhat, but the difficulty of getting proper coaptation of the lacerated edges is by no means insurmountable. After proper approximation of lacerated edges there should be no more obstruction to the drainage of lochia than in the unlacerated cases.

The technique is quite simple: Immediately after the expression of the placenta, the patient is put in lithotomy position. The cervix is exposed by making pressure over the fundus, and an assistant retracts the vulvar orifice, the edges of the cervix are grasped with ring forceps and the edge followed around, using three pairs of forceps. The lacerated edges are brought into vivid relief by the use of ether sponges. Lacerated edges are approximated with interrupted or continuous mattress chromic sutures. With obstetrical operations considered as major surgery, as they should be, the cervical manipulation in an immediate repair should not increase the liability to puerperal sepsis in any greater degree than the application of blades in a low forceps maneuver or the introduction of a vaginal pack.

Our results have borne out this statement, and it is seen that the 7 per cent morbidity is easily within the usual fever limits. The healing was more satisfactory in primipara than in multipara. Scar tissue from the secondary healing of old lacerations and the consequent higher percentage of cervical infection in multipara is the apparent explanation. The number of days required in the hospital was not increased, as it is our custom to keep patients in the hospital from 11 to 14 days post-partum. The factors in the production of lacerations will not be discussed, but it is important to note that lacerations occur in many spontaneous deliveries.

Immediate repair of laceration of the cervix following childbirth can only be done in a hospital and with an assistant, but the advantage to the patient's future welfare are easily worth the trouble when from 70 to 90 per cent of patients are saved the liability to infection of the cervix with its not infrequent sequelae.

End Results in Cauterization, Trachelorrhaphy, Amputation.

In the comparison of the end results in these types of cervical operation for the cure of cervicitis, with or without laceration, the records are compiled from 300 post-operative histories. The patients were all operated upon in the Women's Clinic and Gynecological Division of the Stanford University Medical School during the past eight years. The three series of 100 each were taken consecutively. Data concerning relief of cervical discharge, pelvic pain and subsequent pregnancies was obtained from the post-operative histories. The reports on postoperative cervical discharge are based on actual observations taken in the Women's Clinic. The general scheme for the investigation is that used by Leonard in 1914.

In the 100 cases of cauterization, 86 were cauterized radially, with the Paquelin cautery, under general anaesthesia; at each stroke of the cautery the point being buried in the cervical glandular tissue. Fourteen cases were done with the electric cautery without anaesthesia and were consequently more superficial. It is our custom to have the patient take a hot douche every day for a period of about two weeks following cautery, less frequently after that until at the end of about six weeks the cervix should be healed and clean. In the 100 cases of cauterization reported, an abnormal cervical discharge was present in 100 per cent. Gonorrhoea was suggestive in 18 per cent and positive in 7 per cent of cases. Pelvic inflammatory disease of the adnexa was present in 37 per cent of cases.

In the 200 cases of trachelorrhaphy and amputation, 125 complained of leucorrhoea and there was microscopical evidence of cervical infection in 132 cases. Erosions were present in 120 and lacerations in 162 cases. In general, trachelorrhaphies were done on those with a relatively mild cervicitis, while those of more extensive infection of laceration were amputated. Two types of trachelorrhaphy were done, 87 Emmett type and 13 Sturmdorff. In the amputations, 51 were of the circular type and 49 the Shroder operation.

The effects of cauterization, trachelorrhapy and amputation were contrasted in the relief of leucorrhoea in 225 cases. The cure of the discharge by amputation in 82 per cent is in marked contrast to the 62 per cent cure in cauterization and the 40 per cent cure in trachelorrhapy. Cauterization shows a high percentage of cases merely improved; this is probably because of an insufficient cauterization. In the cured or improved totals, cauterization leads, with trachelorrhapy only 59 per cent.

A comparison of the two types of trachelorrhapy shows the Sturmdorff operation leading the Emmett operation in the cure or improvement of leucorrhoea, 87 per cent to 57 per cent. The inference is plain; cure of cervical discharge lies in the removal of the infected glandular tissue to the cervix. The results of the Sturmdorff

enucleation compare favorably with those of amputation.

The relationship of pelvic pain and dysmenorrhoea to cervical disease is not always clear, on account of the not infrequent association of inflammatory and postural pelvic pathology. Of 89 patients complaining of pelvic pain or dysmenorrhoea, 43 were cauterized, 28 had trachelorraphy and 18 had amputation performed.

The cases have been divided into two groups, those having only cervical and possibly perineal work, and those having a laparotomy in addition to the cervical operation. Although the number of cases is small, the percentage is still against trachelorraphy, with cauterization showing 86 per cent cured or improved, amputation 80 per cent and trachelorrhaphy 60 per cent. The explanation is not far to seek: trachelorrhaphy fails to remove the infected tissue and symptoms from cervical lesions lie mainly in the infection present.

A series containing 199 cases was compiled which represents those of the original 300 who were below the age of 40 at the time of their operation and who were not surgically sterilized at that time. The incidence of pregnancy following trachelorrhaphy and amputation is practically the same, 22 per cent and 21.5 per cent, respectively. This is rather interesting in the light of Leonard's conclusions, that pregnancies were about twice as frequent after trachelorrhaphy. It must be remembered that amputations are performed at various heights, and that the functions of the uterus as regards pregnancy is disturbed in proportion to the amount of muscular tissue removed. In this clinic we have always removed as little tissue at operation as was compatible with removal of the infection. The cauterizations show a remarkably low percentage post-operative pregnancies, 9 per cent. Part of the explanation probably concerns the fact that the incidence of pelvic inflammatory disease was about twice that of the other two series. There were no cases of post-operative stenosis as indicated by the development of dysmenorrhoea to explain the sterility. It is seen that the number of cases which showed merely a diminution in the amount of discharge was very high, 34 per cent. After cautery we know that the cervical canal is diminished in caliber so that if the cervical discharge is not cured, it may still be sufficient to plug the os. It is known that stenosis is not a frequent cause of sterility but that the presence of a mucous plug in the canal is an efficient barrier to the ingress of spermatozoa. From this consideration we can say that pregnancy following cauterization of the cervix is infrequent and that the incident following trachelorrhapy and amputation is about equal.

The course of the pregnancies are considered after cervical operations. The question of the spontaneous interruptions in pregnancies and the character of labor in those progressing to term is of considerable importance in determining the value of cervical operations for women in the childbearing period. The average age in these cases was 29½, the average age in the three types of cases are close enough to eliminate that as a factor in the comparison. In this chart the number and character of pregnancies before and after operation are contrasted. It is seen that after cauterization, the number of pregnancies going to term is larger than before operation, with a consequent decrease in the number of abortions. In the cases of trachelorrhaphy and amputation, there was a very slight increase in the tendency to abortion, the increase being about equal in the two types of operation. Labor following these operations shows no marked departure from the normal. After cautery all the cases that went to term had apparently normal, spontaneous labors. Of the twelve cases of trachelorrhaphy who went to term, nine had easy, spontaneous labors, one was delivered by abdominal section on account of a previous repair for complete perineal laceration and two had labor induced with Vorhees' bags, because of failure to go into labor due to rigidity of the cervix. In the cases of amputation, eight became pregnant, of which two aborted in the second month, one had premature rupture of the membranes with prolapse of the cord in the fourth month, this being a case in which a high amputation had been done. Of the five cases progressing to term, four had easy, spontaneous labors, while the fifth went into labor a month past term, had a moderately long labor and received a laceration of the cervix.

In every case of Emmett trachelorrhaphy the cervix was re-lacerated at delivery.

In a consideration of the results following operations on the cervix it becomes evident that the pathology and symptomatology depend upon the infection in the cervical glands. The relief of symptoms is most marked in those procedures which destroy or remove the infected tissue. Excision of the infected area, as in amputation, has given the best result in the cure of symptoms and has had practically no more deleterous effect upon pregnancy than other operations. Cauterization has given a high percentage in the cure of symptoms, but the incidence of pregnancy after it is very low.

The operation which combines the virtues of amputation with the least apparent disturbance of the function of pregnancy is that described by Sturmdorff. We perform the operation essentially as described by him, with the exception of a few minor details, such as the use of chromic catgut suture material in place of the silkworm gut advocated by Sturmdorff, and the use of a buried suture on either side of the amputated cervix to control hemorrhage. The operation as performed in this clinic is as follows:

Slight preliminary dilatation of the cervix with bougie dilators. This need cause no damage if done carefully and facilitates exact dissection of the glandular tissue to the internal os and permits good approximation of the inverted vaginal flap to the endometrial margin. With the anterior and posterior cervical lips in the grasp of tenacula, a circular incision is made around the cervix at

the juncture of the infected cervical and healthy vaginal mucosa. The vaginal cuff is then well loosened with dissecting scissors all the way around the cervix in order to give good mucosal flaps for inverting. If there is marked cystocele, care must be taken to separate and push up the lower bladder margin. With tension on the cervical lips, the gland-bearing area is dissected out with a sharp knife, to the level of the internal os. When about half this cone is enucleated, retraction is made laterally on the vaginal flaps and a buried suture is laid on each side in the muscular tissue of the cervix at right angles to the long axis of the organ. The operation is practically bloodless from this time on and we believe the tendency to post-operative hemorrhage is diminished. After the cone of glandular tissue has been amputatd at the height of the internal os, the anterior and posterior vaginal flaps are inverted into the hollowed out cervix by the double inverting stitch of Sturmdorff. Thus, healthy vaginal mucosa is substituted for infected cervical mucosa and the musculature and the nerve supply of the uterus are undamaged by the operation. If necessary, a figure-of-eight approximating suture may be used in the mucosa on either side of the new external os. Thus six sutures are used in all. The technique is simple, and the operation can be performed in the majority of cases in 10 to 15 minutes, with no special instruments.

CONCLUSIONS.

In hospital obstetrical practice, in trained hands, the best prophylactic procedure against the development of infection of the cervix is the routine exposure of the cervix in primipara, after delivery, and suture of the lacerations.

For the cure of infection and laceration of the cervix, with the accompanying symptoms, certain types of amputation are the operations of choice.

Trachelorrhaphy is preferable to cauterization if future pregnancy is a consideration.

Cauterization, for the treatment of infection of the cervix, should only be undertaken if future pregnancy is no longer a consideration.

The Sturmdorff conical enucleation of the glandular elements of the cervix possesses the virtue of high amputation, and should give the least possible interference with future pregnancies.

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Poirier and Charpy—Human Anatomy.
A. Sturmdorff—Tracheloplastic Methods and Results.

NEW YORK WELFARE AGENCIES UNITE

A news item states that efforts are under way to group, for purposes of co-operation, more than two thousand charitable and welfare organizations of New York. It is reported that "charitable societies, with their increasing specialization and their undeniable duplication of effort, have been subject of late to a considerable amount of criticism from persons who fail to see a reason for their multiplicity."

What a commentary! The reasons ought to be perfectly obvious, but they are not reasons that mean efficient medical and social service for the public.

PRELIMINARY REPORT ON AN INVESTIGATION OF THE "PROVOCATIVE WASSERMANN" CONTROLLED BY THE ICE-BOX METHOD

By RUTH THYGESON SHEPARDSON, A. B., Special Worker, Skin Clinic, Stanford University Medical School

In view of the uncertainty regarding the status of the "provocative Wassermann" test, it was decided to try out the method with the aid of funds from the United States Interdepartmental Social Hygiene Board. This work is being carried on in the service of Professor H. E. Alderson (Skin and Syphilis Clinic) of the Stanford University Medical School. Owing to unforeseen interruptions, the preliminary report has been much delayed. Although recent publications have described and discussed the ice-box method, much of our work antedates the same, having been conducted in 1919-1920.

The "provocative Wassermann" appears still to be in the indefinite stage of experimentation where the opinions as to its value in the diagnosis of syphilis vary anywhere from enthusiastic advocacy to unqualified disapproval.

It was Gennerich in 1910, who first called attention to the phenomenon of a reversal from negative to positive in a Wassermann reaction soon after an injection of salvarsan. He reported twelve cases, each exhibiting one negative before the injection, and becoming positive from twenty-four hours to fifteen days (the major portion within the first three days) after the injection. This observation of Gennerich was soon confirmed by Milian.

In 1914 we read of some experimentation on the subject by Pease. He believed the "provocative" analogous to the Herxheimer reaction, namely the accentuation of the clinical symptoms of syphilis immediately following treatment with salvarsan, and thought that the most reasonable explanation of the "provocative" effect was that more spirochetes were killed just after the injection and, therefore, more bodies thrown into the blood. In his tests he used 0.4-0.6 gms. of neosalvarsan, took the patient's blood immediately before and on several days following the injection, and observed that the reaction was most apt to become positive on the two days following the injection. His conclusions were that the "provocative Wassermann" was valuable in all stages of syphilis, but chiefly in the tertiary stage, and that it was "fully as reliable as the Luetin test" and offered "the best evidence at present of actual cure of lues."

In direct opposition to these favorable observations of Pease, is King's report in 1916. He gets the impression from the literature that the test is by no means on an established basis, and calls attention to the work of Boas and Haller on the factors of technical error and variation in the reagents used in performing any Wassermann test. Boas showed different results with the same serum, same technic, and same reagents at different times. Haller, however, did not discover any appreciable variation in the serum itself, con-

trary to Craig's statement in 1914 that "great variations may occur in the complement-binding power in the sera of untreated syphilis." King observes that in addition to these factors which might influence the result of the Wassermann test, is the fact that the Wassermann test per se is not sufficiently standardized, objections which all those disclaiming the "provocative" strongly emphasize. King, himself, performed "provocatives" in sixteen cases, and in only one was there any provocative effect, and that appeared one hour after the injection of salvarsan. So his conclusion is that "definite proof of the existence of the 'provocative Wassermann' following salvarsan is not at hand at the present time."

In 1917 we read two opposing reports on the "provocative," the first by Stokes and O'Leary, and the second by Craig.

Stokes and O'Leary ran a series on 103 tests. We shall go into a little more detail as to their results, since we have classified our own results more or less along these lines. Their technique was in brief as follows: An injection of 0.3-0.4 gm. salvarsan, a Wassermann test within one week before the injection, blood drawn from each patient on the third, fourth and seventh day after the injection. Three antigens were used, namely, acetone insoluble, alcoholic extract of syphilitic liver, and cholesterinized alcoholic antigen. Of their 103 tests, 18.4 per cent came out definitely positive with the cholesterinized antigen. Of these 26.3 per cent showed no objective clinical signs suggesting syphilis, 73.7 per cent showed suspicious signs, 57.8 per cent showed clear histories of primary and secondary manifestations, 31.5 per cent suspicious histories, and 10.7 per cent no histories. Sixty per cent of the 103, on receiving the therapeutic test, clinched the diagnosis. Of the 81.6 per cent of the 103 cases showing no reversal, 67.8 per cent were clinically suspicious and 65.2 per cent, on receiving active treatment (therapeutic test), showed improvement impressive enough to establish the diagnosis. Their conclusion was that the therapeutic test (60 per cent as opposed to 18 per cent) is of more value than the "provocative," and that if no good clinical ground for suspecting syphilis exists, the percentage of positives in the "provocative" is so small as not to justify the procedure. They ran another series of tests on the "provocative" in 1920 by a modified Noguchi method and obtained 8 per cent positives as opposed to the old 18 per cent, but still held that the provocative was a necessary procedure in a complete and thorough examination for syphilis.

Craig is one of the advocates of the "provocative Wassermann." He recommends this procedure after the reaction has remained negative for at least a year without treatment, and in case this is negative, a spinal fluid examination. He found that a "negative" became "positive" within a few hours to five to six days after the injection, and that his percentage of positive "provocative" effects ran about 20 per cent. He accounts for the reaction on the basis either of more spirachetes killed or greater activity on the part of these organisms after the salvarsan. His opinion is that it is a valuable aid to the diagnosis of cure and the diagnosis of the existence of the disease, and he has used it extensively with good results especially for the latter purpose.

A later article in the literature on the "provocative" is that of Pollitzer. His conclusions are: "(1) The Wassermann test is so subject to errors of various kinds that dependence on a single positive reaction in a series of tests, is not justified. (2) In an uncured case a change from negative to positive may happen to coincide with the provocative injection, and a positive after the injection may be the result of the normal increase in reagent without relation to the injection. (3) In 150 treated cases I found not a single case of "provoked" reaction, while the assumption of a cure in all these is obviously untenable. (4) In a series of temporarily negative cases selected as probably not cured, the provocative test failed to indicate the presence of syphilis not cured. (5) The 'provocative' is a useless and often misleading procedure."

One of the latest reports is that by Strickler, Munson, and Sidlick, in 1920. They gave intravenous arsphenamine to thirty non-syphilitic patients who had a negative Wassermann reaction, a negative syphilitic history and skin lesions definitely non-syphilitic. Following the injection 16, or 66 per cent, gave at least one positive Wassermann; 14, or 58 per cent, gave two or more positive reactions, and 9, or 38 per cent, gave reactions of 2 plus or greater intensity. This would tend to show that perhaps a positive reaction was the product of the arsphenamine.

R. A. Kilduffe, in 1921, injected rabbits intravenously with weekly doses of arsphenamine, neo-arsphenamine, and mercuric chloride, closely approximating in rabbits the conditions in the investigations of Strickler, Munson, and Sidlick on humans. The results were uniformly negative, a positive Wassermann not being produced in any animal in any series.

In our work the technique employed was that used in the Lane Hospital Wassermann Laboratory supervised by Miss Beatrice Howitt. One-half cc. each of guinea pig complement, antigen and normal salt solution plus 1/10 cc. of inactivated patient's serum were incubated one hour at 37.5° C. in the water bath, then taken out and 0.5 cc. each of goat's corpuscles and amboceptor added, and put back into the water bath until hemolysis took place in the proper control tubes. A parallel series had their primary incubation (that is to say, before the hemolytic system was added) in the *ice-box at 4° C.* for four to five hours, and on adding the hemolytic system were then incubated in the water bath as was the other series. Three antigens were employed, cholesterinized beef heart, alcoholic guinea pig heart, and acetone insoluble.

This method of carrying on the tests enables us to get some interesting sidelights on the relative delicacy of the three antigens used, and also

on the *much greater delicacy of the primary ice-box* incubation as opposed to the primary water bath incubation method.

A few words on the subject of the ice-box method. The first one in this country to advocate its use was Archibald McNeil of the Department of Health Laboratories, New York, in 1912-13. He stated that by a four-hour primary incubation in the ice-box there could be obtained 10.3 per cent more positive reactions than by the usual one-hour incubation at 37½° C. Since then repeated investigations on the subject have been made throughout the country. Practically every one has found that the primary ice-box incubation is the more sensitive. Smith and MacNeal (W. J.), in 1916-17, recommended as very satisfactory the simple alcoholic antigen with a four to twenty-four hour primary ice-box incubation at 8° C. They said that though cholesterinized antigen was more sensitive, it was apt to yield false positives. Berghausen, in 1919, reported that the ice-box method was found by experiment to be so satisfactory that it was adopted at the Cincinnati General Hospital. He stated that there was no evidence of false positives, and recommended the simple alcoholic antigen. Ward Burdick of Denver, in 1920, gives the following comparative statistics:

	Water bath.	Ice box.
Clinically non-luetic	100% negative.	100% negative.
Secondary untreated	100% positive.	100% positive.
Secondary treated		more positives.
Tertiary untreated	55% positives.	100% positives.
Tertiary treated		more positives.

J. A. Kolmer of Philadelphia, after four years' work on seventeen different methods of primary incubation, recommends the ice-box method as the best. He says four to sixteen hours at 8° C., followed by one hour secondary incubation in the water bath, gives admirable results. Rhamy at Fort Wayne, Indiana, in 1921, reports that the ice-box incubation is about 12.6 per cent more sensitive and therefore that much more accurate, and that doubtful positives by the primary water bath incubation method show up as positive by the primary ice-box incubation method.

We found that in the clinically luetic (our series consisting of 134 Wassermanns) the ice-box method yielded 56.6 per cent 3 plus positives as opposed to 32.2 per cent with the water bath method, with none by either method in the clinically non-luetic. We also ran another small series of 220 Wassermanns with the ice-box method on patients having histories *negative* for syphilis, *no clinical signs or symptoms* of the disease and a *negative* Wassermann by the water bath method, and had uniformly *negative* results, thus tending to prove that the ice-box method does not yield false positives. In our tests the cholesterinized antigen was the most sensitive, the simple alcoholic next, and the acetone insoluble the least.

Unfortunately, we were not able to use the ice-box series in computing the number of "provocative" effects, since the old Wassermanns taken before the injection of salvarsan were done only by the water bath method. Therefore, only the first ten cases of this series were considered positive. All of these ten had shown negative Wassermanns by the ice-box method before the provocative injection was given.

The Wassermann reaction before the injection was taken as part of the routine of the Skin clinic, and from one day to two months after taking the blood (the average being under one week) a "provocative" injection of 0.3 to 0.6 gms. arsphenamine was given. Then the blood was taken *every other day*, beginning either the first or second day after the injection, until seven tests were recorded.

	Treated or untreated.	No. of days Wass. negative before prov. inj.	History No. of patient.	Gms. of arsphenamine.	No. of days after inj. before Wass. became positive.	Water bath method.	Ice-box method.	Luetic history.	Clinical symptoms.
1	—	8	88434	0.4	2	+ + +	+ + +	—	—
*2	—	17	59452	0.3	2	— — —	+ + +	±	±
3	—	13	71628	0.6	6	+ + +	+ + +	±	±
4	—	5	78543	0.3	2	+ + +	+ + +	—	—
5	+	6	76754	0.3	a-1	+ — —	+ + —		
					b-9	+ + +	+ + +	—	—
6	+	3	85156	0.6	4	+ + +	+ + +	+	+
7	+	32	65482	0.4	12	+ + +	+ + +	±	+
8	+	4	23909	0.4	5	+ + +	+ + +	+	+
9	+	1	22099	0.4	15	+ + +	+ + +	+	+
†10	+	14	67565	0.3	3	+ + +	+ + +	+	+
11	—	..	82304	0.4	..	— — —	— — —	±	±
12	+	..	89146	0.4	..	— — —	— — —	±	±
13	—	..	81242	0.4	..	— — —	— — —	—	—
14	+	..	34657	0.4	..	— — —	— — —	+	±
15	+	..	16189	0.6	neo.	— — —	— — —	±	±
16	+	..	10056	0.4	..	— — —	— — —	+	+
17	—	..	28179	0.4	..	— — —	+ + +	+	±
18	+	..	62707	0.4	..	— — —	— — —	+	—
19	+	..	41237	0.4	..	— — —	— — —	±	+
20	+	..	44148	0.4	..	— — —	+ + +	+	+
21	+	..	77826	0.4	..	— — —	— — —	+	+
22	—	..	78040	0.3	..	— — —	— — —	—	±
23	—	..	77975	0.3	..	— — —	— — —	—	±
24	+	..	77497	0.3	..	— — —	— — —	±	+
25	—	..	76413	0.4	..	+ — —	+ + +	±	—
26	+	..	75973	0.3	..	a — —	+ + —		
						b — —	+ + +	+	—
27	—	..	75357	0.6	..	— — —	— — —	—	—
28	—	..	75639	0.3	..	— — —	+ — —	—	—
29	—	..	87252	0.4	..	— — —	— — —	—	—
30	—	..	85384	0.4	..	— — —	— — —	±	—
31	—	..	83887	0.6	..	— — —	— — —	—	—
32	—	..	84194	0.4	..	— — —	+ + —	±	±
33	—	..	.....	0.4	..	— — —	— — —	—	—
34	—	..	64525	0.4	..	— — —	— — —	—	—
35	+	..	54993	0.6	neo.	— — —	— — —	+	+
36	+	..	62937	0.4	..	— — —	— — —	+	+
37	—	..	88756	0.4	..	— — —	— — —	±	±
38	—	..	88827	0.4	..	— — —	— — —	±	±
39	—	..	87997	0.4	..	— — —	— — —	—	—
40	+	..	87734	0.4	..	— — —	— — —	±	±
41	+	..	79868	0.4	..	— — —	— — —	±	±
42	+	..	79893	0.9	neo.	— — —	— — —	±	±
43	+	..	81810	0.6	..	— — —	— — —	+	+
44	+	..	81688	0.4	..	— — —	— — —	±	±
45	—	..	82076	0.6	..	— — —	— — —	—	—
46	—	..	75103	0.4	..	— — —	— — —	—	—
47	+	..	75426	0.6	..	— — —	— — —	+	+
48	—	..	86566	0.4	..	— — —	— — —	—	—
49	+	..	83415	0.4	..	— — —	+ + —	+	+
50	+	..	83835	0.6	..	— — —	— — —	±	±
51	—	..	84091	0.6	..	— — —	— — —	—	—
52	+	..	83033	0.4	..	— — —	— — —	—	—
53	+	..	83166	0.4	..	— — —	— — —	±	±
54	+	..	83555	0.4	..	— — —	+ + +	—	—
55	—	..	83082	0.4	..	— — —	— — —	—	—
56	—	..	83548	0.4	..	— — —	+ + +	±	±
57	—	..	85825	0.4	..	— — —	— — —	—	—
58	—	..	86000	0.4	..	— — —	— — —	±	—
59	—	..	86880	0.4	..	— — —	— — —	±	—

* Wass. before inj. negative by ice-box, so subsequent ice-box reading could be taken as reversal.

† Wass. negative 14 days before.

There were only *fifty-nine* cases in which we were able to obtain complete data. Of these, ten or 17 per cent showed a reversal from nega-

tive to positive (using the ice-box and water bath method before the injection and afterwards). This occurred in two to fifteen days (average, two to six days) after the injection of arsphenamine. This reversal had to be (in order to be counted) from 3 minus or 1 plus 2 minus to 2 plus 1 minus or 3 plus by the cholesterinized antigen, never from 3 minus to 1 plus 1 minus. The remaining 49 or 83 per cent remained negative throughout.

Of these 49 cases it will be noted that numbers 17, 20, 25, 26, 28, 32, 49, 54, and 56 became positive by the ice-box method, but were not considered "positive provocatives" because the test before the injection had been made by the water bath method only. All of these but two had positive luetic histories or clinical symptoms, or both, so the positive ice-box result is at least suggestive. Had these nine cases been classed as "positive provocatives," of course our percentage of reversals in the positive direction would have been much higher.

Of the ten (17 per cent) positives, 40 per cent had positive histories, 30 per cent had suspicious histories, 30 per cent had negative histories, and 60 per cent had positive clinical symptoms some time, 10 per cent had suspicious clinical symptoms, 30 per cent had negative symptoms.

Of the forty-nine (83 per cent) negatives 28 per cent had positive histories, 37 per cent had suspicious histories, 35 per cent had negative histories, and 25 per cent had positive clinical symptoms at some time, 33 per cent had suspicious clinical symptoms at some time, 42 per cent had negative clinical symptoms.

CONCLUSIONS

1. Our percentage of positives (17 per cent) is about the same as Craig's (20 per cent) and Stokes and O'Leary's (18 per cent). (The 18 per cent obtained by Stokes and O'Leary in 1920 was by the Noguchi method.)

2. A so-called "provocative reaction" does in all probability occur. However, we cannot be sure in the face of all the uncertainties of the Wassermann reaction, that this effect is not due to some imperfectly comprehended factor either in serum, reagents, or technique.

3. If a positive Wassermann does justify treatment, and in 17 per cent of cases this can be obtained by the "provocative" procedure, it might be worth while employing in private practice, but not in clinical practice, where the amount of time necessary for the patient to stay away from work is too great to justify any benefit the patient might receive thereby.

4. We believe that an equally valuable and less time consuming and laborious procedure is to have the patient return for repeated Wassermanns (*to be done by both ice-box and water bath methods*) at varying intervals depending upon the clinical indications and history.

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OPERABILITY OF THE SENILE PROSTATE—A REMINDER TO THE GENERAL PRACTITIONER

By WIRT BRADLEY DAKIN, M. D., Los Angeles

It is the aim of this paper to act as a reminder to those who are too occupied with their professional duties to keep informed regarding senile prostate, or who have forgotten the recent favorable results of the management of this condition, or who have still to be convinced of its truth. It is depressing to the urologist and to the patient to have it said that the patient has a poor chance if operated, and palliative treatment is of uncertain benefit.

Many examples of the results of modern treatment of senile prostate could be given, but for brevity only two cases will be reported.

Case 135—Operated in two stages with a six weeks' interval, two years ago. Age 83. Widower. Teacher by occupation.

At the time of my first examination, this patient was semi-comatose with a complete retention and overflow. During two previous years he had had occasional attacks of retention and had been catheterized.

During the present attack an attempt had been made to keep a retaining catheter in, but the last time it came out the attending physician had been unable to replace it. I had catheterized this patient and had obtained 900 cc. of urine.

The early and usual symptoms of prostate enlargement began ten years previously. Rectal examination showed a very large prostate. No cystoscopy, blood pressure, or kidney functional tests were made. The patient was taken to the hospital at once for a cystotomy and was drained for six weeks before his kidney function or general strength would permit the second operation. It was a week after the first stage before he was clear mentally, and stated that he was unable to recall occurrences of the past two weeks. The second operation required less than fifteen minutes. The bladder wound healed in ten days and the abdominal in eighteen. The patient was up in a wheel chair in four days and walking in nine days. He urinated normally through the urethra on the fourteenth day when his urethral retaining catheter was removed and he has continued to do so ever since. His general health is excellent as shown by frequent walks of from two to five miles for exercise.

Case No. 140. This patient, because of acute retention, was taken to the hospital three years ago. The condition was relieved and although an operation was advised at once, no one would assure the family that the patient could be successfully operated upon, so he was returned home and continued catheterizations.

For two long years the patient's wife had to be a constant companion because he would not let anyone else catheterize him. In addition to having recently he had been totally deaf for thirty years, while all of his urinary trouble could have been avoided had correct information been more readily obtainable.

The remaining history of this case is similar to the first one mentioned. Since the operation the patient has been in excellent health and can be found in a near-by town working in his garden almost every day.

Both of the preceding cases were advised that they were too old, and their general health such that they could not stand any operative procedure.

The usual conditions considered as contra-indications to operative procedure are: Age; urosepsis; asthenia; cardio-vascular changes; possibility of urinary incontinence or impotency following the operation.

Age is no logical contra-indication. Culler collected data on patients, with an average age of sixty-seven years, that he had operated upon during a period of one and a half years. He believes that the average age of these patients suggests that senility may not be a bar to operative procedure as often as supposed, and that certain physical defects in old age are remediable without the high mortality rate anticipated by many. His experience with these old patients inclines him to conclude that aged people are often passed by who may be salvaged without more than ordinary surgical risks and that disaster in such cases is often born out of delay and compromise.

Careful pre-operative attention, reasonable speed in operating and painstaking after treatment will reduce risks which are derived from cardio-renal defects and other concomitants of age.

Anhedonia of senility probably eliminates those surgical risks common in younger patients which grow out of fear and anxiety; indeed, old men appear to face the issue of surgical operation with extraordinary calmness and fortitude and are docile patients during the post-operative period. Culler concludes that senility as a contra-indication to surgical operation is made applicable too generally.

Asthenia, urosepsis, and cardio-vascular changes may all be corrected by proper and sufficiently long pre-operative treatment and under good management these patients regain their strength, appetite, and general health to such an extent that not only the family but the patient remarks that it seems unnecessary to operate at all, because they feel as well as they did before their trouble began. I have had two patients who refused to proceed any further, but were compelled to return later because of recurrences of obstructive symptoms.

Urinary incontinence, except in occasional cases of malignancy, does not occur if patients are carefully operated upon. The family, patient, or physician may have known, however, of such instances and frequently ask for an explanation.

Patients not critically ill, or advanced in years, and not needing an immediate operation, very frequently inquire of the possibility of impotency as a result of operation. In a series of 150 cases I have endeavored to determine this question, and find that if impotency develops just previous to, and as a result of their urinary trouble, there is a partial return of sexual desire, and occasionally they are normal for that period in life. If there was partial or complete impotency previous to the onset of their urinary disturbance, the prostatectomy will have no direct bearing on the case.

Statistics concerning the average duration of life of cases of prostatic obstruction not subject to operation has been best presented by Squier. This author presents a table of thirty-four cases. Conclusions drawn from this series of cases reveal that:

Fifty per cent of unoperated patients die within three years from the onset of obstructive symptoms where catheter life is not necessary.

1. The beginning of catheter life shortens this expectation of life about 50 per cent.

2. Beginning of catheter life increases the mortality of 66⅔ per cent within the shortened period.

3. The average length of life of unoperated carcinomas is thirteen months from the onset of symptoms.

In an interesting article by Deaver rather recent statistics of cases of prostatic obstruction subject to operation are well presented.

"In 1905 Whiteside reported that the average mortality among many American prostatectomists was 20 per cent, with only 30 per cent of complete cures. A similar study was made in 1915 in which the work of thirty-five surgeons was recorded, giving data in 1423 cases. In this latter series about half of the surgeons submitting reports operated on considerably more than half of the 1423 cases. These are the men of wide experience and the mortality rate in their work is less than 3 per cent, in contrast to a mortality rate of 26 per cent, as reported by the less experienced operators.

"As regards post-operative mortality the percentage incidence has fallen from a general average of 70 per cent in 1905, to 18 per cent in 1915, while among the more experienced operators it was but 7 per cent, according to the more recent figures"

The same is true among the English surgeons. In the first series of 100 cases operated upon by Freyer, the mortality rate was 10 per cent; in his last cases it was only 3 per cent, with a general average among 1000 of 5.5 per cent. About the time when Freyer's mortality was slightly over 6 per cent (1908), C. M. Page collected statistics from the records of four London hospitals for the corresponding years and found the mortality rate to be 21.5 per cent. Wade reports a mortality rate of 35.4 per cent from one of the largest hospitals in Scotland for the same period, and states that during the year of 1906, sixty-nine patients were subjected to prostatectomy in St. Thomas' Hospital in London, of whom fourteen died, giving a mortality record of

20.3 per cent. These statistics are, however, the result of operations antidating the present knowledge of operative technique.

SUMMARY

At the present time, taking all cases as they come, including those patients that do not respond in the most satisfactory manner to prolonged preoperative treatment, the mortality ought not to be more than 2 to 5 per cent.

DIARRHOEA IN INFANTS IN RELATION TO CERTAIN FOOD INTOLERANCES.*

By H. H. YERINGTON, M. D., San Francisco, Cal.

During the past few years an immense amount of work has been done in this country on the nutritional diseases of childhood, and out of this work have come many valuable points on the treatment of intestinal disturbances. We are now able to classify many types of diarrhoea, and apply a rational form of treatment to each type.

Owing to our mild California climate, and good milk supply, the infectious or "summer diarrhoea" does not concern us as much as it does the men in our large Eastern cities. However, the disturbance caused by the intolerance in infants for certain foods is present here, and is the subject of this paper.

Food injury is classified by L. T. Royster under three headings:

(1) Acute, in which proper food is given, but the intestinal tract is overloaded.

(2) The accidental administration of an excess of one or more food elements in a bottle baby's formula (either fat, sugar or proteid). In these cases vomiting is more frequent than diarrhoea, fever is absent, and occasionally convultions occur.

(3) Food Injuries (chronic). A child with a beginning intolerance for one of the food elements will eventually acquire an intolerance for all others, if the elemental portion is not regulated in time. Giving an infant an amount of any one of the main food elements, as fat, sugar, or proteid, in excess over a long period of time will cause a diarrhoea which may become fatal. The character of the discharge depends on the food element in excess. A mixture too strong in milk, fed over a short period of time, is a frequent cause of diarrhoea.

The beginning diarrhoea of "Simple Indigestion" is caused by fermentation of carbohydrates and fats, in which saprophytic bacteria are the ones most active. Another type is the putrefactive one caused by the overfeeding of proteid. In both types the activity of the normal intestinal flora become very much altered.

A beginning food injury is often the fault of the physician in allowing the mother to take the responsibility of her infant's bottle feeding. She obtains her information from neighbors or from a feeding book, and the formula which has agreed with another baby may set up a chronic diarrhoea of a severe type in her own infant.

In order to prevent intestinal disorders in infants, we must be familiar with the percentages of foods, and know something of their caloric or food values. Most important of all, we must be able to do routine stool examinations and know something about modern pathology of the intestinal excretian.

Infants sufferings from a beginning food injury often show very characteristic symptoms. The patient who has been overfed with high fat mixtures or too much milk is fussy, cries continually, sleeps on his abdomen or on his arms and knees; the stools in this case are at first soft, buttery, contain soft white curds, and is often called the "scrambled egg" stool. When the case becomes more chronic the stool becomes hard, crumbly and is of a grayish color. The fat in the latter stool is in combination with calcium and magnesium and are typical "soap stools." When the excess of fat becomes greater, a relative acidosis results, with an excess of ammonia in the urine. There is then a diarrhœa with very frequent, watery, acid stools.

Indigestion from carbohydrates is produced by an excessive amount of sugar or starch in the food, and the characteristic symptoms are vomiting, flatulence and colic. These babies are very uncomfortable, the buttox is raw and irritated with acid stools. The passages are loose, green in color, very acid in reaction and show marked evidence of fermentation. The microscopic examination is important. The fat globules show red when stained with acetic acid Soudan iii, and the starch grains blue with Lugol's Solution. Both the fat and carbohydrate stools are acid and the protein stool alkaline in reaction.

The protein type of indigestion is much more frequent in the breast than in the bottle-fed baby and is usually easily corrected.

The symptoms from an excess of casein are vomiting of large tough curds, flatulence, and somnolence. The stools are liquid, brown in color, with a putrefactive odor, and contain large bean-like curds. A point in the differential diagnosis between a fat and proteid curd is that the former will dissolve in ether and the latter will not.

We now come to the extreme type of food injury or extreme malnutrition, with marked diarrhœa, which is so resistant to treatment. These cases are the ones having an intolerance for all food.

The characteristic thing about these babies is the extreme degree of dehydration they present. The loss of weight is rapid, there is no subcutaneous fat and the bones appear prominent through the dried-out skin. The eyes are sunken and the fontanel depressed. The skin is gray and pallid and lacks elasticity. The respiration is deep, and the pulse soft and rapid. The rectal temperature at times reaches 103° or 104° F. The child is very apathetic, crying at times, then lapsing into a semi-comatose condition. The liver and spleen are usually palpable and the abdomen scaphoid. Very little urine is passed and it contains small amounts of albumen.

* From the Sub-division of Pediatrics, Medical Department of Stanford University. Read before the Fiftieth Annual Meeting of the Medical Society of the State of California, San Diego, May, 1921.

Infants are in a critical condition, and unless careful treatment is instituted, death will result within a few hours' time.

In discussing these cases, Marriott has observed that there is a marked acidosis present; due to a decreased volume flow of blood, which leads to an accumulation of acid products of metabolism in the tissues and a decreased alkaline reserve of the blood. If the volume flow of blood is diminished in the abdominal vessels, the functional ability of the gastro-intestinal tract to care for food is impaired, and if normal amounts of food are given diarrhœa results.

Fever is produced by the decreased amount of water in the body available for evaporation, and water evaporation is of great importance in the heat regulation of the infant's body. Fever, as a result of dehydration, has been frequently seen in infants, adults, and animals, and examples are seen in the starvation temperature of new-born infants.

If an infant suffering from diarrhœa is given food, especially sugars or fats, the diarrhœa in the majority of cases becomes worse, and the degree of anhydremia tends to become greater.

It is imperative, then, in these cases to get fluid into the system, and as these babies cannot take enough water by mouth to be of any benefit, other methods must be employed. Howland considers the injecting of Ringer's Solution into the peritonial cavity the most efficient means of accomplishing this. Another valuable method is the intravenous injection of a glucose solution. The latter is found useful because the carbohydrate spares the protein destruction going on in the body. Added fluid may be given by mouth in small quantities and by subcutaneous injections.

The next thing to do is to get food which can be used immediately and one which the baby can tolerate. As the majority of these infants are suffering from intolerance of both fat and carbohydrate, the ideal food would be one high in proteid, which would change the intestinal flora from a fermentative acid state to a putrefactive alkaline state. Eiweissmilch, protein or albumen milk, fills this requirement, being high in proteid, low in carbohydrates and fats, and has a relative high food value. This preparation is made by separating the whey from the curd, breaking the curd up into fine particles by putting it through a sieve and then adding buttermilk to the mixture. This gives us a mixture containing:

Fat	2.5%
Sugar	1.5%
Protein	3.0%
Salts	0.5%

The preparation can be made fat free by using a fat-free milk. Certain manufacturers put out products, such as "Larasan," which are much simpler to make up and produce the same beneficial results.

In closing this paper, I would like to describe two cases which illustrate the remarks I have made, and bring to your attention the practical treatment of such cases.

Baby M., age 9 months, weight 9 lbs. 8 oz., admitted to hospital June 28, 1920. Discharged July 15. This baby was three weeks premature, doing well on the breast for two months, then up to the fifth month did poorly on artificial foods, especially high fats; then it had influenza, from which it recovered. Since then the baby has been on Eskay's Condensed Milk, top milk mixtures, and lately fresh undiluted goats' milk. For the past two weeks there has been vomiting, diarrhœa, curdy, acid, fat-type stools, with a loss of two pounds in weight.

Physical Examination—Shows a very thin, marasmic-type baby, skin dry, hanging loosely on the body, abdomen distended, tympanitic, liver enlarged, spleen palpable. The extremities are thin, cold, musculature poor. The baby has the appearance of being very much dehydrated.

The child is having frequent, watery, frothy, acid stools. The buttox is excoreated. It regurgitates all food given to it and at present refuses to take its bottle. The pulse is rapid and of low tension. Temperature ranges between 98° and 103° F. and the child is restless and uncomfortable, crying when disturbed.

Hospital Record—On admission the baby was put in a warm bed, flushed out, and given a weak milk, dextro-maltrose, barley water mixture by mouth. What little was taken of this was regurgitated, and an attempt was then made to give the baby a soda solution after the stomach had been washed out. The frequent movements continued and the patient was very restless and uncomfortable during the day.

At 6 p. m. pulse was more rapid, temperature 103.8° F., restlessness more marked, bowels still very loose, and the child looked as if it would die before morning.

At 7 p. m. an intraperitoneal injection of 350 cc. of normal saline was given, followed immediately by an intravenous injection, via the superior longitudinal sinus, of 50 cc. of a 5% solution of glucose. The child had a much more comfortable night, and at 8 in the morning 400 cc. of normal saline was again injected into the peritoneal cavity, followed by 50 cc. of 5% lucose by vein. Following these injections the temperature dropped from 103.2° to 100.6° F., the child slept and the pulse become stronger and slower. At 12 m. the following formula was given:

Fat-Free Protein Milk	24 ounces
Dextro-Maltrose	1 tablespoonful
Barley Water	8 ounces

Six ounces to be given every four hours and five feedings in twenty-four hours.

During the next twenty-four hours the stomach was washed with plain water before each feeding, and the feeding then given by tube. At the end of twenty-four hours the baby had regained a pound of its weight and the improvement in its general condition was marked. The baby went home in three weeks on a whole milk formula, with cereal and beef juice, and seven weeks from admission it was well and contented, weighing 12 lbs. and 6 ounces, a gain of three pounds and four ounces.

This case is typical of a fat and sugar intolerance, with a marked dehydration, saved by the

injection of large quantities of fluid at a critical period.

Baby L., age 3 months, weight 13 lbs., entered Stanford Hospital October 2, 1918.

This baby was perfectly normal at birth, breast fed up to the present time. Has always been fussy, and has spit up curds and had rather liquid foul-smelling stools most of its life. A week ago the mother contracted typhoid fever and was admitted to the hospital with her baby.

EXAMINATION.—The baby was very well nourished, but anæmic looking, with dark circles under the eyes. The musculature was flabby, and although the baby was happy, it did not seem to have the activity of a normal baby of its age. Eyes and ears were negative, lungs clear, heart normal. The abdomen was soft, no deep glands palpable, spleen easily felt, liver negative. No rigidity of the neck, skin clear. The stools and a Widal showed no evidence of typhoid. The temperature was 99.2° F., pulse 120, respiration 24. The stools were alkaline, liquid, full of curds, and foul smelling. The baby was put on a formula of: Cow's milk, 18 oz.; water, 16 oz.; milk sugar, ½ oz.

From October 2 to 6 the child did fairly well, but still had curdy, loose stools and a temperature ranging from 99° F. to 102.4° F. On October 8 the baby had lost twelve ounces, began to vomit curds and was put on a skimmed milk mixture. The child at the time looked rather toxic.

On October 8 a formula composed of: Protein milk, 20 oz.; water, 14 oz.; Dextro-Maltrose, ½ ounce.

The following day the temperature went up to 104.8° F., and during the day there were twelve foul-smelling liquid bowel movements. The stools were cultured and contained numerous stripococcal colonies with quite a growth of the bacillus proteus.

At 11 o'clock that night the child was very toxic, restless and moving the head from side to side. The temperature was 100° and respiration 100; no involvement of the lungs. Dr. Langley Porter was called into consultation and made a diagnosis of a toxemia, with split proteid intoxication.

The following treatment was carried out. The bowel was washed out twice daily, with two quarts of water containing two drams of sodium bicarbonate and Murphy dripe of 5% glucose were given. Milk was discontinued and a formula of Dextro-Maltrose, 2 tablespoonfuls; water, 20 ounces; three ounces every two and a half hours were given.

The next day the child was very much improved and a tablespoonful of breast milk was added to the mixture. Two days later the bowel movements were formed, soft yellow, and the baby was non-toxic. On December 2, a month later, the baby left the hospital on a whole milk mixture in good general condition.

This case is an excellent example of a baby having an intolerance for proteids, which was corrected by giving carbohydrate feedings.

THE MEANING OF THE PASSAGE OF INTRAPARTUM MECONIUM.*

By MARGARET SCHULZE, M. D., San Francisco
Instructor in Obstetrics and Gynecology, University of California Medical School.

The significance of the passage of intrapartum meconium has been a matter of interest to obstetricians for many years. Unfortunately at the present time there is no unanimity of opinion, although the great majority agree that in vertex presentations it is a sign of grave moment and indicative of impending fetal asphyxia. All unite, however, in stating that it is of no significance in breech deliveries. Some believe that the sign is of uncertain value, yet others believe that it constitutes an indication for immediate delivery if it can be done without adding to the risk of the mother. Our interest in this matter has been aroused by the large number of cases which passed intrapartum meconium just before labor, but which gave no other evidences of danger either by change in the rate of the fetal heart or by being born in asphyxia. Seeking to ascertain the true value of the sign, we have reviewed our series of 3700 deliveries and have made a study of the literature.

The first statement on the subject was made by Völtern in 1687, who wrote that the most certain sign that the child is dead in utero is when the umbilical cord tears and when a tarlike material is expressed from the anus, although many children die without this phenomenon. Völtern further states that German midwives had long considered the passage of meconium a certain sign of death. Since then the subject has been reviewed at infrequent periods by a number of authors.

It appears as a result of our study that the majority of textbook authors base their views upon the work of Schwartz, who published in 1858 his work on fetal asphyxia, in which he claimed that if the fetus passes meconium it means, if not death of the fetus, at least danger of its death in the act of birth. This view was considerably altered by Jesse in 1888, who made the first tabulated study of this subject, but whose work appears to have been overlooked. His study was based upon 3340 labors in Ahfeld's Clinic in Marburg. Meconium was passed in 9½ per cent of the cases. Seventy-four children of this series were born dead, seventy-four were more or less asyphyxiated and 176 were born without evidence of asphyxia. As a result he concluded that the passage of meconium alone did not constitute an indication for forced delivery. The subject was again investigated six years later by Rossa in Gratz in 1894 in a comparatively small series of eighty-five cases, which, however, were studied exhaustively. His work more or less confirmed the observations of Jesse. Since beginning our investigations there has appeared a publication on this subject by Gejrot in Stockholm in 1920. This author reviewed the labors of 6435 vertex presentations, in which in-

* Read before the Fiftieth Annual Meeting of the Medical Society of the State of California, Coronado, May, 1921.

trauterine meconium was passed in 5.6 per cent (369 cases). Eighty-three and a half per cent of the children that passed meconium were not asphyxiated, 10 per cent were slightly asphyxiated, 3 per cent were deeply asphyxiated and 3½ per cent were born dead. Gejrot's study shows that children who pass meconium after rupture of the membranes were more likely to be born asphyxiated than those who had passed meconium before the membranes ruptured. Especially when the membranes ruptured early and meconium did not appear until many hours later was the prognosis very grave. The fetal heart tones were not altered in 80 per cent of his cases. Of the remaining, 20 per cent whose fetal heart showed change during labor, approximately one-half were born either deeply asphyxiated or dead. His study indicated that this 10 per cent passed meconium simultaneously with the appearance of deep asphyxia. In a smaller percentage of cases meconium had been passed early in labor and one could not determine, therefore, whether more had been passed later at the beginning of deep asphyxia.

When we tabulate the study of other authors we find that the percentage of cases which pass meconium during labor varies considerably. Thus Kehrer gives 4 per cent, Gejrot 5.6 per cent, Jesse 9.38 per cent, Rossa 16 2-3 per cent of vertex cases. The study of the literature has impressed upon us the importance of distinguishing between cases which pass meconium prior to labor and which have it dissolved in the amniotic fluid and those which pass it during birth. Fresh meconium is flaky and of the typical greenish-brown appearance. Old meconium is dissolved in the amniotic fluid, to which it imparts a green color. The latter is quite different from that seen when the fetus has become macerated or when blood has become dissolved in the amniotic fluid.

With these points in mind, we have investigated the frequency and meaning of meconium in 3700 cases delivered in the University of California Woman's Clinic. We have found, with Rossa, that when cases were not studied with the definite point in mind the passage of meconium may easily be overlooked; thus in long, difficult labors it would be noted and recorded if it occurred, yet it could easily be overlooked in cases with short, normal labors, thus making its prognostic significance seem more serious than it actually is.

In our last 1300 hospital cases this point has been especially studied, and we found 101 cases which passed meconium during labor, or 7.7 per cent, whereas in the previous 1700 it occurred in only thirty-five cases, or 2 per cent. In 700 cases on the outside service, all multiparae with comparatively short and easy labors, there were but seven cases, or 1 per cent. On reviewing these cases, we found that the prognosis in these three groups did not vary as much as one might expect. Thus, of the 101 cases in the last series of 1300, 73 per cent were born unasphyxiated or with such slight evidences that no resuscitative measures were necessary. In the first series of 1700 cases, 66 per cent of the children that passed meconium required no resuscitation. Of the 700 cases on the outside service, 71 per cent of the babies that passed meconium were not asphyxiated. Eight per cent of the cases noted in the study of 1300 cases were born dead, as were 14 per cent of the first series of 1700 and 13 per cent of the outside service.

Classifying our cases in the groups suggested by Rossa, we find that of the 143 cases, in seventy the amniotic fluid was stained with meconium at the time of rupture of the membranes; in forty-one it was clear at the time of rupture but meconium appeared before the birth of the child, while in thirty-two more it was not noted before the child was born, but the amniotic fluid following the child was discolored.

Of the first group of seventy cases, fifty-two were entirely normal at birth, five showed very slight evidences of asphyxia but soon cried lustily without special efforts at resuscitation; three were moderately asphyxiated, requiring artificial respiration for several minutes; three were deeply asphyxiated, but were resuscitated after prolonged effort, while seven could not be resuscitated. Thus in fifty-seven, or 81.4 per cent, of cases in which meconium appeared in the amniotic fluid at the time of rupture of the membranes, respiration was established immediately, or in a very few minutes, without artificial aid.

Fetal heart changes were absent in the cases which showed no asphyxia at birth. Our study indicates that meconium appearing in the amniotic fluid at the time of rupture of the membranes is usually not accompanied by fetal asphyxia. A few cases, however, presented definite asphyxia, and all of these had changes in the rate and rhythm of the fetal heart.

In a considerable proportion of these it could be definitely determined that the meconium was fresh meconium. In others, old meconium was passed without signs of asphyxia at the time of rupture of the membranes, while later, sometimes after many hours, asphyxia developed from causes not yet operative at the time of rupture. In a few of these it could be determined that fresh meconium was passed at this later time.

Meconium appearing later in labor where the fluid was clear at the time of rupture of the membranes was noted in forty-one cases. The prognosis in this series is considerably more serious, yet seventeen of these cases showed neither changes in the fetal heart nor evidence of asphyxia when born. Six showed very slight asphyxia, making twenty-three, or 56 per cent, of the series in which respiration was normally established without artificial aid. Seven were born dead, six deeply asphyxiated, five moderately so. These were all cases of prolonged, difficult labor, and all showed changes in the fetal heart.

Thirty-two cases showed no meconium before the birth of the child, yet meconium appeared in the fluid following it. Seventeen were unasphyxiated, five slightly, making twenty-two, or 68 per cent, which required no resuscitation. Six showed

moderate asphyxia, and in three of these there was difficulty in delivering the body of the child, due to large shoulders. The fetal heart was normal when last noted in all of these cases, yet no notes were given in the moment just before birth. Four were deeply asphyxiated, one of these could not be resuscitated, death in this case probably occurring during the operative delivery from compression of a tight loop of cord about the child's neck.

Meconium appearing after changes in the fetal heart seems in a number of cases to signal the development of a very deep asphyxia. In five of the cases of fetal death other evidence of fetal distress had already appeared and operative measures were already being undertaken or normal labor proceeding so rapidly that delivery was accomplished in a very few minutes, but the child, when born, could not be resuscitated.

In other cases fetal asphyxia, even sufficiently severe to end fatally, may develop without the appearance of meconium in the amniotic fluid. This happens particularly in cases where the death of the fetus is due to severe hemorrhage, as in placenta praevia, or from premature separation of the placenta, as has been shown by Altenbach.

If, then, meconium, as in these cases, is not always a sign of very early asphyxia, it is probable that its appearance in the cases which appeared normal at birth is entirely independent of asphyxia. This probably holds true especially in the cases where it appears on rupture of the membranes, since fetal distress rarely develops in the first stage. In any consideration of the subject it appears, then, necessary to review the influences which might act on the child through the mother, such as toxic states of the mother or of drugs administered to her.

Since the time when Porak in 1875 stated that the administration of quinin was frequently followed by meconium, the view has held that its administration causes physiologic changes in the fetus, which are followed by the passage of meconium, yet both Porak, and subsequently Runge, showed that, although meconium frequently appeared during the expulsive period, there was no slowing of the fetal heart and the forewaters were uniformly clear. As castor oil and quinin are frequently employed to induce labor, we have thought it of interest to review the meconium cases in 385 of our cases in which labor was so induced. Only 6.5 per cent, or 1 per cent less than the meconium of our total series, passed meconium subsequent to the administration of castor oil and quinin. The dosage usually given is .6 of a gram of quinin repeated in an hour, following 30 cc. of castor oil. The castor oil administered to the mothers also had no effect upon the child, nor did any other cathartic which was administered early in labor.

Nitrous oxide analgesia was used in practically all of the 1300 cases for varying periods of time. Nitrous oxide anaesthesia and in a few cases ether were used where operative delivery became necessary. No effect of the anaesthesia on the passage of meconium could be observed. Toxemia cases which presented elevated blood pressure and urinary findings have been considered, but we have been unable to find that there is an increased number of cases passing meconium in mothers showing these evidences of toxemia. Rossa has suggested that severe infectious diseases in the mother might influence the child and cause it to pass meconium. In a study of forty-five cases which developed influenza during pregnancy or labor in the recent epidemic, none showed meconium during labor.

The size of the child is a matter of some interest, since previous authors have found that the weight of the children presenting meconium usually fell within the normal limits of weight. Seeking to follow out Rossa's contention that an overdeveloped child might pass meconium during labor because the bowels became too full, we have reviewed the weights of our series. We have taken as large or postmature one which weighed 4000 grams or more. The average incidence of children of this size in our clinic was found by Dr. Maxwell to be 4.3 per cent, while 22 per cent of our total meconium cases were children of this weight, thus showing the high proportion of overdeveloped children passing meconium during labor. (Many of these were one to four weeks overdue, but only 23 per cent of this series had labor induced with castor oil and quinin, while 20 per cent of the whole meconium series had received castor oil and quinin.) The percentage of asphyxia in the larger children who passed meconium is not greater than in the smaller children, since 80 per cent were born normal or with very slight asphyxia. Deeper asphyxia, which we might expect as a result of more difficult labors, was even rarer. There were no deaths in the postmature series and only one was deeply asphyxiated, a child which weighed 5250 grams and which was delivered by a difficult high forceps. A number of the cases of moderate asphyxia had had difficulty in delivery from impaction of the shoulders.

As a result of our study, we seem justified in presenting the following conclusions:

The passage of meconium by the child during labor is in a large majority of cases entirely independent of fetal asphyxia. The passage of old meconium at the time of rupture of the membranes is of no prognostic value as to the later development of asphyxia. Fresh meconium, with rupture of the membranes or later in labor, may or may not be associated with asphyxia. In the latter case changes in the fetal heart sounds are present also. Meconium appearing after other signs of fetal distress is frequently a sign of the onset of very deep asphyxia and the child may perish even though delivery be very rapidly accomplished. A strikingly high proportion of overlarge children pass meconium, in most cases without serious significance. The cause of the passage of meconium in cases without asphyxia cannot as yet be definitely stated.

DETERMINATION OF THE EXTENT AND NATURE OF THE RENAL LESION IN BRIGHT'S DISEASE *

By THOMAS ADDIS, M. D.

(From the Medical Department of Stanford University Medical School, San Francisco)

This year Christian has collected in a text book [1] a summary of the more important facts which have been established as to Bright's disease. He and his collaborators have made careful and extensive investigations with the most recent methods and his critical review of our present position therefore carries great weight. When I had read it I looked up Bright's Medical Cases,[2] published nearly a century ago. The differences were interesting. One of the most striking was the presence in the modern treatise of many tables of figures giving the results of functional tests. There were no figures in the old book. Yet Bright had noted the existence of changes in the volume of urine and in the amount of albumen it contained. He had even in certain cases observed that the amount of urea in the blood was increased, though at the same time there was less than usual in the urine. In another type of case he had noted the existence of lipemia and of a decrease in the protein content of the blood. We are now able to give a quantitative numerical expression to these qualitative observations of Bright's. But this difference is, after all, often only superficial. No one, I imagine, would be more ready than Dr. Christian to admit that our modern exactitude of expression does not necessarily carry with it any greater knowledge than Bright possessed as to the origin and significance of the changes we can now follow so closely.

But there was another and a more fundamental difference between the new and the old. It lay in the attitude taken towards the relation between function and structure. The modern point of view, and I believe this fairly represents the feeling of those who have had most experience, appears to be that it is illusory to attempt to draw anatomical deductions from our clinical observations and functional tests. Bright would never have subscribed to this opinion. The sub-title of his book is, "illustrating the symptoms and cure of diseases *by a reference to morbid anatomy.*"

It was to anatomy, not to physiology, that he looked for the clue to treatment. He studied functional abnormalities in his patients as aids towards the construction in his mind of a clear picture of the structural defects from which they arose. He believed that as experience accumulated it would be possible for the physician to see through the varying symptomatology and changing functional reactions to the hidden anatomical cause. But as a matter of fact, as experience has accumulated, as methods which supposedly measure the functional capacity of the kidneys have developed, the discrepancy between clinical predictions and post-mortem findings has become more and more apparent.

The recent review I mentioned admits the impossibility of making an anatomical diagnosis. During the last decade there has been a tendency not only to admit this fact, but to set it aside as of no moment. We are now inclined to take the results of functional tests as ends in themselves and not as means towards an anatomical diagnosis. We comfort ourselves with such statements as, "It is more important to know what the kidney can do than to be able to say what it looks like," and so on.

This modern spirit of resignation in failure is due not only to a deeper knowledge of the difficulties of the task Bright set, but in part at least it rests on a satisfaction with our new functional methods. Even if it must be admitted that our results are not always in accord with anatomical findings, we can say that that may after all be due to the inadequacy of histological technique. It is easy to point to special instances where this is certainly true. It is easy for the clinician to believe in his methods and to wait with patience for the anatomy of the future to come into line with his clinical physiology.

There is, of course, plenty of evidence that the present divorce between clinical and pathological findings is in part due to the inadequacy of clinical and not of histological methods. For instance, in circumstances where there is no possibility of any structural abnormality invisible to the microscope, in cases where the renal tissue is entirely normal, we can remove half of that tissue from the body by taking out one kidney, and yet find that the results of the methods now in use will still lie well within the range of normal variation. If our methods cannot tell us when half the renal tissue has been removed, it is clear they are not able to tell us how extensive has been the destruction of tissue in a case of Bright's disease. Yet this is a practical anatomical question which may be of great importance for treatment and prognosis.

It should not be impossible to develop a functional method which would answer this question; for it is axiomatic that functional activity can manifest itself only through and by means of structure. It should be possible to find conditions under which functional activity is limited by structure, so that we could take our functional results as an indirect measure of the amount of secreting tissue present. Since 1913 we have been working at this problem, and as a result of experimental work [3] we have developed a functional method which I believe enables us to make a rough estimate of the amount of actively secreting renal tissue in the living kidney.

The main requirements of such a test became apparent as a result of a study of the factors influencing the degree of variability in the function of the normal kidney. Everyone is familiar with the wide fluctuations in the activity of the kidney, even of the same kidney under apparently identical external conditions. Since the structure is constant, such variations in function must be caused by other than anatomical factors. It was found that no matter how carefully external factors, such as food and water intake, were controlled, there was still a considerable variation in the

* The work on which this paper is based has been aided during the past year by a fund raised by Mr. Wellington Gregg and his friends.

activity of the kidney when measured over short time periods, and that this variation was in part explained by changes in the concentration of urinary constituents in the blood. It was necessary, therefore, to choose some substances whose concentration in the blood could be accurately determined during the period when its rate of excretion was being measured. This substance had also to be one of the so-called "non-threshold" substances, for otherwise changes in the threshold which could not be controlled or measured might influence the results.

We chose urea and studied the factors which induced those variations in the rate of urea excretion which were not to be accounted for by changes in the concentration of urea in the blood. The external requirements of the method were thus determined. But even after the elimination of many disturbing factors, and even though the effect of changes in blood urea concentration had been discounted, there still remained a considerable variability in the rate of urea excretion. It was only when the kidney was put under strain by the administration of large amounts of urea and water that this variability disappeared.

Everyone is familiar with the relative constancy of action of the kidney in terminal cases of chronic Bright's disease, when there is retention of urinary constituents in the blood and very little normal renal tissue left. Normal kidneys show the same constancy when they are given more work than they have ever had to do before, more work than they can at once perform. By giving a large amount of urea by mouth a temporary uremia is produced. Under these conditions all the kidney tissue works at top speed, and the rate of urea excretion is limited only by the amount of actively secreting tissue present.

The details of the test are as follows: The blood urea concentration is first determined in order to find how much urea will have to be given. If, as often happens even in fairly far advanced cases of Bright's disease, there is no increase in the amount of urea in the blood, the patient is given 30 grams of urea, or 20, 15, 10 or 5 grams, depending on the degree of urea retention which may be present. If the urea concentration in the blood is over 75 mgs. per 100 cc., no urea need be given. At 6 a. m. next morning the patient slowly drinks a quart of water in which the required amount of urea has been dissolved, and every hour thereafter drinks two glasses of water. No breakfast may be taken, since protein food has a marked effect on the rate of urea excretion quite apart from its effect on the blood urea concentration. By 9 a. m. the apex of the curve of the raised blood urea concentration is passed and during the next three hours it falls slowly. This is the time during which three accurately timed urine collections are made, and the level of the curve of blood urea concentration determined by analyzing three samples of blood drawn in the middle of each of the three periods over which the rate of urea excretion is measured. From these the rates of urea excretion per hour are calculated and divided by the amounts of urea found in 100 cc. of the blood obtained in the middle of each period. In the same individual under these conditions this ratio remains nearly constant.

In different normal individuals there are constant individual differences. The average ratio for normal individuals is approximately 50—i. e., there is 50 times more urea excreted in one hour's urine than is found in 100 cc. of blood removed while the urea is being excreted. This is independent of the actual level of blood urea concentration. We have a large number of observations of normal individuals, but we are still collecting further data, and it will be some time before it will be possible to determine the probable error of the ratio in normals. We have a series of observations on patients on whom the blood urea concentration and the phenolsulphonephthalein test gave normal results, who yet gave ratios below the lower limit of normal variation. In such cases we believe that the degree of depression of the ratio measures in an approximate manner the degree of destruction of the actively secreting renal tissue. We believe that from these functional results we are justified in drawing conclusions as to the extent of the pathological process in the kidney.

There is another anatomical question often of the utmost clinical importance which is for the most part neglected by the clinician. Prognosis depends not only on the extent but also on the nature of the renal lesion. Inflammatory conditions in which the glomeruli are involved are the most grave, since this type of lesion sometimes progresses until almost no normal renal tissue is left, and even if it heals, always leaves scars. The degenerations are relatively seldom progressive, and on account of the great capacity of the tubules for regeneration, often end in a complete restitution of the secreting tissue. The atrophic lesions, though progressive, are usually so slow that prognosis is good so far as the kidney is concerned. But in making these distinctions, clinical symptomatology is a very poor guide and functional results are of little value. The only method available is the direct one of looking in the urine for anatomical evidences of renal inflammation, degeneration or atrophy. We have, therefore, for some years carried on a systematic investigation of the urinary sediment in cases of Bright's disease. It was soon found that a certain uniformity in the conditions under which the urine was collected was necessary, and since we observed a disappearance of casts in serial observations on cases in whom diuresis was induced by water drinking, we adopted the following plan under which a urine of high concentration is obtained in all except terminal cases of chronic Bright's disease:

The patient is given a wide-necked cylindrical bottle with written instructions to the effect that from breakfast time until next morning, when the urine is collected, no fluids of any sort are to be taken, that at a certain hour in the evening urine is to be voided and discarded, and that next morning the whole twelve hours' night urine is to be

passed directly into the bottle. The urine so collected is allowed to sediment for an hour, and 30 cc. are then carefully pipetted from the bottom of the bottle, special care being taken in so doing that the pipette passes all round the rim and over the whole surface of the bottom of the vessel. The sediment thus collected is centrifuged, the centrifuge inverted at an angle of about 20 degrees so that all of the urine drains off, and the deposit at the tip is removed by a capillary pipette to a slide, while the inverted position of the centrifuge tube is still maintained. If this is not done the urine hanging on the edge of the tube will run back and dilute the centrifuged deposit. In cases where we know that a large number of casts are to be expected we mix up the whole twelve hours' urine and centrifuge in a graduated tube. All but 0.5 or 0.25 cc. of urine is then pipetted off, leaving the deposit undisturbed. After thorough mixing, a drop is placed on a white blood cell counter and from the count the total number of casts in the twelve-hour specimen is calculated. In cases where there are only a few casts they can be counted directly on a slide. In all cases where a sufficient number can be found a differential count of the casts is made. Note is also made of the number of red blood cells, leucocytes, and epithelial cells.

This method has been especially helpful in the diagnosis of glomerular nephritis, the only clinically important form of Bright's disease in which an acute inflammatory lesion is primary. During the early stages, as might be expected, there are large numbers of leucocytes and red blood cells in the urine, but in this there is nothing which can be taken as indicative of glomerular inflammation, since blood and pus are common to an acute inflammatory lesion anywhere in the urinary tract. But there is one form of cast, the blood cast, which I believe is found only in glomerular nephritis. I have not been able to find anywhere a description of the many forms and appearances which blood casts may take. The erythrocytes often become so agglutinated that they are no longer recognizable and only the deep yellow or brownish color remains to indicate the original composition of the cast. It requires some experience to be able to distinguish this form of blood cast from the granular cast, originally epithelial, which is yellow because of the presence of a pigment which appears to be analagous to the pigment found in the cardiac muscle cells in "brown atrophy" of the heart.

But it is especially in the later stages of glomerular nephritis that the finding of blood casts appears to be of special diagnostic importance. We have a number of cases under observation in whose urine a few, sometimes only one or two, blood casts are almost constantly found. In some of these cases there has been a preceding acute glomerular nephritis with general anasarca, but in most of them there is not even a history suggestive of such a condition. If these kidneys could be examined microscopically I believe it would be found that a few glomeruli would show evidence of an active inflammatory lesion. Some of these glomeruli will in time be so damaged as to become functionless and their tubules will degenerate and be replaced by fibrous tissue. As this process extends to other renal elements there will be a slow disintegration of the secreting tissue.

In a few cases which we have been able to follow for some years it would appear that the progress of the pathological process is so slow that the condition may never produce a lesion so extensive as to be of clinical importance. But it seems not improbable that it is these commonly unrecognized cases of focal glomerular nephritis which may be seen for the first time when complete renal insufficiency is impending and in whose small cirrhotic kidneys the pathologist finds evidence that the primary lesion has been a glomerular inflammation.

The cases of Bright's disease in which a degeneration of the parenchyma of the kidney is the primary lesion give evidence of damage to the tubular epithalium in the form of epithalial casts and of the coarsely granular casts which are derived from the disintegration of the epithalial cells. In certain forms, also, the sediment shows many hyeline and epithelial casts with fat droplets. Some of these droplets are doubly refractile. They are not pathognomonic of a fatty degeneration of the renal cells, since we have confirmed Gross's statement [4] that they may be produced in any case of Bright's disease by feeding cholesterol. But this finding is none the less of diagnostic importance, since it is found in a group of cases which form a distinct subdivision of Bright's disease, with its own peculiarities of prognosis and its own special requirement as regards treatment.

Although many instances in which a degeneration is the primary lesion recover completely, there are a certain number, larger I believe than is usually supposed, in which the condition progresses

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Is It Chiro-Quack-Tic?—Under this heading Leslie's Weekly, beginning with the issue of January 4, is running a series of articles of incalculable value to the public. These articles, written by Mr. Severance Johnson, an experienced writer, are of the same general character that Samuel Hopkins Adams used in "The Great American Fraud" a great many years ago. Not only physicians but every citizen should read these articles and see what they are really invited to support by their ballots and by their co-operation in this and in other States. Leslie's Weekly is rendering the public a splendid service in the publication of these articles, and physicians above all people should read them and pass their copies along for other people to read.

Arizona, California and Nevada Sections of the American College of Surgeons—The first group meeting of the three States was held in one of the hotels of Los Angeles on February 17 to 18. Stanley Stillman of San Francisco, chairman; Lewis R. Morton of Los Angeles, secretary, and Granville MacGowan of Los Angeles, chairman of the committee on arrangements. One meeting was devoted to questions of hospital betterment. There were two scientific surgical meetings, and one morning was given over to clinical demonstrations in Los Angeles hospitals.

to a stage in which the destruction of secreting tissue is so great that the remaining tissues become insufficient for life. We followed one such case through almost its entire course and found in the end a contracting kidney in which the microscopical findings indicated that a degeneration was the primary lesion, and we have several others under observation in various stages of renal decompensation. In none of these cases have blood casts ever been found.

Kidneys in which there is neither an acute glomerular inflammation nor any pronounced tubular degeneration may suffer a slow and partial atrophy which is associated with an arteriosclerosis of the renal arteries. The urine shows a variable number of hyaline casts with an occasional epithelial or coarsely granular cast and only a trace of albumen. The functional capacity is diminished, but we have never yet found any extreme loss of function. It is still uncertain whether this very slowly progressive lesion ever becomes so extensive as to lead to death in uremia. The evidence from the clinical side will have to come from systematic urinary examinations and repeated determinations of the extent of the lesion. Direct and positive evidence of the possibility of such a development would be given if a gradual failure of functional capacity were shown, combined with the development of the typical urinary sediment found in terminal cases of contracted kidney, and this without the appearance at any time of any indication of acute glomerular inflammation or active tubular degeneration.

In cases bordering on or actually in uremia there are a considerable number in which no evidence of active inflammation or degeneration can be found. Instead there are large numbers of casts which vary widely in size, from those with the usual breadth through all stages up to those which are four or five times broader than ordinary casts. I think it is justifiable to regard such broad casts as direct anatomical proof of the dilatation of the tubules which postmortem examination shows in these kidneys. The casts in such cases have a characteristic appearance. Those which might be called hyaline have not the transparency of the ordinary hyaline cast, but seem to be of a denser material, and there are all grades of transition to the typical waxy cast. The granular casts are more granular than usual. Some are composed of a highly refractile material in which what might be the faint outlines of degenerated epithelial cells or leucocytes can be seen, but more often they have an appearance suggesting a loose aggregation of dark particles which appear quite black under the low power, and have not the sharply defined and regular contour which casts usually possess.

The interpretation of these findings is largely dependent on a comparison of the character of the urinary sediment during life with the nature of the lesion as revealed by a microscopical study of the kidney after death. Our postmortem material is as yet small, so that our conclusions can only be provisional. But there is enough to encourage us in the belief that a careful examination of the urinary sediment will often give very direct evidence as to the nature of the lesion in the kidney.

Even though we were always able to determine with accuracy both the nature and the extent of the renal lesion, we should still be far from a real knowledge of Bright's disease; for in Bright's disease more than the kidney is involved, and in some of its forms, prognosis and treatment depend on an evaluation of the condition of the heart, of the vessels and of the effect of the disease on other organs, as well as on an estimate of the state of the kidneys. But just on account of the complexities of these problems it is important, for purposes of analysis, to consider each of the elements separately, and only in the end to combine them in a composite judgment. The renal lesion is one of these elements, often the most important, and this special problem can only be solved when we are able to answer two questions, the question of the nature of the lesion and the question of its extent. I believe that a thorough and systematic examination of the urinary sediment under controlled conditions gives the most direct evidence as to the nature of the lesion, while its extent must be determined by a measurement of the total functional capacity of the kidneys under conditions designed to call forth the greatest possible amount of work of which they are capable.

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A FALSE RUMOR

This office is amazed to discover that a rumor is prevalent that members of the Indemnity Defense Fund have been assessed $30 a year since the institution of the fund in December, 1916. This is not true. The first assessment on Fund Members will be levied this year. Those who joined it at its inauguration have had the benefit of its protection for five years without assessment of any kind for that period.

Payment of $15 in cash and the execution of a note in the sum of $15 due one year after date entitles any member in good standing to join the fund.

RECENT ADVANCES IN THE DIAGNOSIS AND TREATMENT OF HAY FEVER AND ASTHMA*

By ALBERT H. ROWE, M. S., M. D., Oakland, Calif.

The investigations of the last ten years have cleared the haze away from the asthma and hay fever problems, so that definite relief is now in store for most sufferers with these diseases. No one now can doubt the fact that these conditions are usually manifestations of protein sensitization or bacterial infection, since recent work shows that both bronchial asthma and hay fever may be due to susceptibility to one or several of the proteins in foods, pollens, animal hairs, bacteria, and several other substances like orris root.

Protein sensitization, moreover, has been shown to cause many cases of eczema and urticaria. All such conditions should be investigated with skin tests especially for foods, and also, if indicated for animal hairs and pollens as shown recently in Walker's article entitled "Causation of Eczema, Urticaria and Angino-Neurotic Edema." A recent case of eczema emphasizes the truth of this statement. In this case our skin tests showed marked susceptibility to most vegetables as well as to wheat, and there had been a vegetable diet prescribed, which, of course, had exaggerated the eczema.

These diseases, then, are the marked examples of protein sensitization, and internists today are wondering about the effect on the body of the slight but constant sensitivity to foreign proteins. Many of the obscure diseases, as suggested recently by Cooke, such as migraine, arthritis, chronic dyspepsia, renal and hepatic diseases may be associated with a chronic anaphylactic state. Gay and Southard have described the marked fatty and waxy changes of muscle, the local necrosis of epithelium, and the fibrous thickening of the glomerular capsule which results from acute anaphylaxis. It is, therefore, very probable that continued minimal anaphylactic shocks can work permanent damage. Therefore, for this added reason, the study of our present knowledge of protein sensitization is most important.

GENERAL CONSIDERATIONS

In the study of hay fever and asthma patients, a thorough diagnostic examination is the first essential to correct and successful management. We must be sure that the asthma is not associated with some lung, heart, kidney or other organic disturbance. Focal infections, especially in the sinuses, teeth, tonsils and pelvis must be discovered and cleared up. These cases, moreover, should all be examined, with the greatest care, by a competent nasal specialist and the remotest possibility of sinus infection ruled out. We feel, however, that operative procedures on the nose should not be done with the idea of a cure of hay fever or asthma without a careful diagnostic study by an internist, who can not only rule out the presence of organic disease, but also discover the presence or absence of protein sensitivity. Otherwise much unnecessary and sometimes dangerous nasal surgery will be done as, for instance, in the case of a recent patient, who gave a most marked reaction to orris root, which is found in nearly all face powders, and where the nose had been thoroughly operated on from all angles, without the slightest relief.

To determine the fundamental cause of hay fever or asthma, skin tests with the various proteins of pollens, animal hairs, foods, bacteria, orris root and certain other substances in selected cases such as boxwood dust are absolutely necessary. These tests have been shown to be specific, and the whole procedure in the large part is out of the experimental stage, ready for the physician who wishes to give his asthmatic or hay fever patient as good and scientific treatment as is possible. In our work over 2,400 separate tests have been made on over ninety different patients and reactions have been obtained to nearly all kinds of foods, including fruits and vegetables. The technique of Walker and his suggestions as to the interpretations of the scarification method of skin testing have been followed explicitly since the intradermal method has certain disadvantages such as the danger of anaphylactic shock, the inability to do any large number of tests at any one sitting, and the inconstancy of some of the reactions. The so-called delayed reaction, which shows up twenty-four hours after the test with a tender, reddened area often slighthly purulent, has been watched for in all cases. The very positive reactions present a most definite urticarial wheal with amœba like pseudo-podea and a red areola around about. We have obtained the most marked reactions with the pollen, animal hair, shell fish, wheat, and orris root proteins, though occasionally other proteins such as those of carrot and onion give striking results.

The manner in which these proteins produce their symptoms is a matter of the greatest conjecture. Why one person will have hay fever and another will have asthma from pollens, is surely a problem. Undoubtedly the cells of the entire epidermal covering of the body are sensitized to the proteins. Whether the asthma is due to a vagotonia or whether the mucous membrane of the bronchi becomes swollen and congested in the same way that the nasal mucosa does in hay fever is not settled.

Koessler feels that these conditions may be manifestations of a poisoning due to toxic amino acids which the body cells have split off from the proteins of pollens, food, bacteria, or animal hair. Thus, the unknown is ever stretching ahead of us in our medical studies.

HAY FEVER

That certain types of hay fever are caused by pollens was first suggested by Blackley in 1873 in "Experimental Researches on Hay Fever." He was able, to his own satisfaction, to explain the production of such symptoms by animal hair by the probable carrying of grass pollens in the fur of the animals, but his theory broke down when he attempted to explain the action of food in the production of this condition. In 1905, Dunbar proved that hay fever could be produced by the

* Read before the Alameda County Medical Society, Oakland, May, 1921.

inhalation of pollen, and tried to treat patients with pollen injections. Since then, through the work of Noon and Freeman, Clowes, Goodale, Cooke, Koessler, Scheppegrell, Walker, and Selfridge here in California, the present knowledge of the cause and treatment has evolved.

It is now certain that hay fever symptoms are due to susceptibility to proteins not only of pollens but of animal hairs, foods, bacteria, orris root and certain other substances. The patient's history will usually suggest which proteins are the most likely cause. However, though pollens cause most seasonal hay fever, certain of the summer coryzas, we have found are due to animal hairs and especially to bacteria. Again, bacteria or foods cause most of the all-year hay fevers, though it is well known that pollens may be at the basis of certain of these disturbances. Hence, no set rule can be laid down in regard to the character of the proteins which are to be used in testing any definite case. The physician doing this work must be prepared to test with all the proteins to which the patient is exposed.

For our work we have available the proteins of 86 foods, 8 animal hairs, 15 bacteria, 74 pollens, and that of several sachets, perfumes and orris root. The proteins of food, animal hair and bacteria have been purchased through commercial houses and they seem to be very satisfactory. As Selfridge[3] has shown, however, the commercial pollens are useless for our work here in California, since this flora differs absolutely from that of the East, as shown by Professor Hall, and there are apparently many more hay fever-producing grasses and shrubs here than there. Hence, we have collected the pollens of the hay fever-producing grasses, shrubs, weeds and trees of this region of California ourselves, and have them available for diagnosis and treatment.

The recent articles of Walker have crystallized the thought on this subject, and we have conducted our work along lines suggested by him. He classifies the causes of hay fever and asthma in the following diagramatic way:

Causes

Sensitive		Non-Sensitive	
Seasonal	All year round	Seasonal	All year
Pollens	Hair	Bacteria	Bacteria
Foods	Food		
Bacteria	Bacteria		
Animal hair	Pollen		

Much difference of opinion exists at present, concerning the best method of diagnosis and treatment of hay fever due to pollens. Scheppegrell thinks that one representative of each of his so-called biological groups of pollens is sufficient to use for diagnosis and immunizing purposes. Selfridge and probably Goodale, however, feel that there is a marked specificity for the individual pollens of the various species, and the former contends that immunization with each pollen to which the patient is susceptible is necessary for success. The hay fever pollens are probably much more profuse in California than in the East, and our own experience would indicate a marked specificity for each individual one.

For immunizing purposes, Walker and Goodale[4] use strong dilutions finally in getting their good results, while Scheppegrell[5] and certain others recommend small doses. Our work confirms Walker's experience, and doses of strong dilutions are gradually administered, the dosage being controlled by skin tests. It is most gratifying to see the positive skin test to pollen protein gradually disappear with careful treatment. However, such immunity, it should be remembered, must be re-established each year, though it is hoped it may become permanent with successive immunizations. When the patient is sensitive to foods, removal of the food is usually effective. We have not attempted to immunize patients with hypodermic injections of wheat, but have recommended in several instances the gradual feeding of the offending food proteins, beginning with one-half milligram and working the dose gradually up to several grams. In regard to this food idiosyncrasy, we must remember, as Talbot has pointed out, that it often gives way to pollen or animal hair sensitiveness later in life. Horse dander susceptibility has been treated with gradually increasing doses of horse dander protein subcutaneously. Feather protein sensitivity has been taken care of by substituting floss pillows and mattresses for feather ones. Orris root symptoms require the use of rice powder if the patient is not sensitive to it, since nearly all commercial face powders contain orris root. Bacterial types of hay fever require the isolation from the sputum or nasal secretion of the offending organism and the preparation of an autogenous vaccine from it, especially if it is a streptococcus or any other organism than a staphlococcus or diphtheroid, in which latter cases Walker feels autogenous vaccines are not necessary.

To appreciate the results which can be obtained from such therapy, one must consult the most excellent articles of Walker entitled, "Frequent Causes and Treatment of Perennial Hay Fever" and "Sensitization and Treatment of Bronchial Asthmatics with Pollens."

We have made a study of twenty-six cases of hay fever seen in my private work, and in these cases there have been:

13 instances of seasonal pollen sensitiveness;
10 instances of bacterial sensitive and non-sensitive types;
6 instances of susceptibility to pollens, foods, and bacteria;
3 instances of sensitiveness to animal hairs as well as to pollens or bacteria;
9 instances of susceptibility to orris root;
1 instance of sensitiveness to beef protein;
2 instances of sensitiveness to chicken feathers alone.

To illustrate the diagnosis and treatment of seasonal hay fever due to pollens alone, the following case will be summarized:

E. M., a woman, age 30, has had hay fever of the most severe type for eighteen years, always from February to September. Constant running of eyes and nose, sneezing on arising in the morning, and for one-half to one-hour periods during

the day occur. Suffers with terrible dryness of the throat and itching of the nose and eyes. Cannot go out into the country or fields or even into the night air. Feels bloated and swollen at times as well as feverish, and often large wheals come out over body. All symptoms disappear on going to San Francisco or into the high Sierras. The father has had hay fever for forty years and many of his people have catarrh.

Cutaneous tests showed marked reactions to one to five hundred dilutions of the pollens of poa annua, oats, canary grass, wheat, fescue, Kentucky blue grass, barley, rye, brome, velvet, beard grass, timothy, mugwort, oryzopsis, and moderate reactions to white top, sage brush, dock, rag weed and poverty weed.

Immunization given for two months last year, with gradually increasing doses of the dilutions of these pollen proteins, relieved her of her hay fever for the first time during July and August for years. She has gained thirty pounds and feels better than she has for years. She is now able to ride and walk in the country, and can go out at night.

Other cases of this type could be cited. Our experience, in brief, indicates that pollen hay fever can be relieved by correct immunization with pollen dilutions to which the patient is susceptible. It is possible, in our minds, that the pollens of certain flowers such as the daisy, aster and cineraria can cause hay fever, providing enough of the flowers are grown in a given locality. A patient's house was recently found to be surrounded by Shasta daisies to which pollen she gave a tremendous reaction, and even though other grasses were found to be positive, immunization to Shasta daisy as well as the grasses was carried out.

The non-sensitive seasonal bacterial type is illustrated by the following case:

R. B., a man, age 31, has had attacks of running of the nose, itching and congestion in nose, and sneezing lasting about one day. Attacks occur usually in the summer. Sweeping always brings on attacks, and they come with nearly every cold. Asthma may come with a cold for about two days.

Shell fish has always poisoned him. Lips, tongue and throat swell, stomach becomes unsettled, and he vomits and feels very ill after eating even a small amount.

Cutaneous tests with all the foods he eats except for shell fish as well as animal hairs, orris root, and pollens were entirely negative.

He, therefore, is an example of the seasonal non-sensitive bacterial type of hay fever, and will probably respond to the autogenous diphtheroid vaccine which we have prepared for his treatment.

A most interesting example of the sensitive bacterial all-year-round type of hay fever as well as of the marked horse dander hay fever is as follows:

G. G., a woman, age 21, has had sneezing every morning until noon for the last eight years, following a severe attack of bronchitis. Sneezing often is steady and lasts into the afternoon, and may awaken her at night for one-half to one hour. Nose runs terrifically, and nose and roof of mouth itch. Has tightness in her chest, and breathing is never easy. Feels tired and drowsy all the time. She also has had a typical hay fever and wheezing when she has been around horses, for the last three years. She becomes so ill and tired, and eyes and nose itch and run so much that she must go to bed after being around them.

Cutaneous tests were positive to staphlococcus albus and strongly positive to horse dander and horse-hair protein. To all other proteins her tests were negative. Cultures of her abundant nasal secretion showed a pure culture of staphlococcus albus, and three injections of the autogenous vaccine, prepared by my bacteriologist, Miss Margaret Eakin, relieved her completely. For three months she has been free from all symptoms. We are also immunizing her carefully to horse dander proteins, and feel confident that she will be able to be around horses again without trouble.

An example of food sensitiveness accompanying pollen susceptibility, follows:

A woman, age 30, has typical hay fever beginning in April and lasting through July. She is susceptible to several of the spring pollens, and also to many of the green vegetables. We feel that the limitation of these vegetables in her diet is most important. She is being immunized to the pollens to which she reacted.

A most striking example of orris root and non-sensitive bacterial hay fever, follows:

F. S., a woman, age 24, has had attacks of swelling of the nasal mucosa, marked coryza and watering of the eyes, marked swelling across the bridge of the nose and swelling of the eyes, for the last three years, coming every few days. She has been unable to use orris root as a shampoo, and is unable to ride on a street-car or go into a room with women who have used face powder. With severe attacks she gets marked throbbing in nose and over her eyes, and is so miserable that she has to go to bed. Her nose has been operated on several times, with no relief. During the last year her hay fever symptoms have persisted, and during the last few months she has been having asthma.

Cutaneous tests were negative to all proteins except orris root, to which she gave a tremendous reaction.

When she does not come in contact with face powder she is fairly comfortable, though her symptoms have persisted, probably due to a secondary nasal infection. We feel that when she is immunized to the staphlococcus aureus, which Miss Eakin has found in her sputum, she will get complete relief.

These examples of the various proteins which can cause hay fever, show the propriety of the suggestions of Cooke to call this disease "protein rhinitis." Our work confirms the idea of multiple sensitization and specificity of proteins in hay fever, and shows the futility of doing hay fever testing here, with anything except a full supply of California pollens, foods, hairs and bacteria. We feel that this work moreover, can best be carried out by a trained bacteriologist, who can make free and frequent use of bacteriology with the minimal expense to the patient.

ASTHMA

Meltzer probably first suggested, in 1910, that bronchial asthma is due to an anaphylactic state. In 1912, Schloss[6] first demonstrated that specific sensitization to foods existed in man, and that the skin test could be used to determine this susceptibility. His work was extended by other investigators to urticaria and eczema and laid the foundation for the memorial series of studies, which Walker has published during the last four years.

In these twenty-seven or more articles, Walker reports his scientific investigations on his large

series of asthmatics and shows in careful detail the manner of treating nearly every type of case. No one interested in this subject should miss a careful study of all these articles.

His articles in the "Oxford Medicine" summarizes many points which are important to mention here.

Walker states that true bronchial asthma is an anaphylactic phenomenon, resulting from some foreign protein. Asthmatic bronchitis, however, is the result of prolonged respiratory infection and produces dyspnœa, bronchitis, and coughing at night due to the accumulation of a sticky sputum. Often asthmatic bronchitis is superimposed on true bronchial asthma, this occurring early in cases in children due to the susceptibility of their mucous membranes to infection.

Walker, as previously stated, uses the cutaneous skin tests rather than the intradermal one. A positive test for a protein may not mean that that protein is causing the asthma, but it does point out a danger which should be kept in mind. Omission of a food from the diet may desensitize a patient and change a positive test to a negative one. Hence, it is important to be eating the foods for which tests are done and to repeat slightly positive reactions. Bacteria may give a negative test for protein sensitiveness, but may still cause asthma due to their infectious nature alone.

Of six hundred asthmatics, Walker found 48 per cent sensitive to some protein, and 52 per cent non-sensitive. Sixteen per cent of the 600 were sensitive to animal emanations, mostly to horse protein. Twelve per cent were positive to foods, wheat, egg, potato and fish being the most frequent in succession. Ten per cent were positive to bacterial proteins, the staphlococcus aureus, streptococcus hemolysans and hemolyticus, staphlococcus albus, and streptococcus viridans being the order of frequency. Micrococcus tetragenous, diphtheroid, and other bacteria also give positive reactions. Eleven per cent gave positive tests to pollens. Pollen asthmatics often have a secondary bacterial bronchitis.

Walker shows that as the age of onset of asthma increases, the frequency of sensitization decreases and the frequency of non-sensitiveness increases, the latter being universal after the age of fifty. After forty, occupations such as baking, tending horses, or sifting coffee beans are apt to bring on asthma due to the exposure to the specific proteins. Each sex, all ages, and all races are equally susceptible to asthma. The longer the duration of asthma, the more pronounced is the resultant bronchitis and emphysema and the more difficult the relief. Multiple sensitization occurs most frequently in youth and sensitization to one protein is apt to be followed by another later on. Eczema is usual in youth where a food susceptibility is present. Heredity was positive in about 48 per cent of all asthmatics.

In regard to treatment, Walker states that high temperature destroys anaphylactic properties of food so that toasted bread, baked potato or boiled milk may be given to people susceptible to the proteins of these foods. Patients, moreover, may be able to eat small amounts, but not large amounts of certain foods. Eighty per cent of the sensitive cases are relieved by protein therapy, and another 10 per cent are relieved by vaccines. At least two-thirds of the non-sensitive asthmatics are relieved by vaccine therapy, or we must try another organism if the vaccine fails. Operations will not relieve the sensitive types, and surgery should only be done in the non-sensitive types to remove the foci of infection or promote drainage. Change of climate will help the non-sensitive patients, but not the sensitive ones, unless they are susceptible to pollens.

We will conclude our article with the analysis of thirty-eight cases of asthma, which have been referred to me in my private practice. Of these cases there have been:

23 cases of the sensitive and non-sensitive bacterial type.
6 cases of the bacterial and food sensitive type.
2 cases of the bacterial, food and animal hair type.
2 cases of animal hair type alone.
2 cases of the food type alone.
2 cases of the pollen and bacterial type.
2 cases of the pollen type alone.
1 case of the bacterial, food and pollen type.

A brief summary of some of the histories and methods of therapy will be given.

Three cases illustrative of the bacterial type of asthma will be summarized:

M. M., a woman, age 25, has had asthmatic wheezing continually since she was eight years old. Since the age of sixteen, it had been so distressing in the winter that she had to come from her home in Seattle to California. She has never raised any sputum. Severe attacks are frequent. She has been unable to ride horses for some years on account of the exaggeration of her asthma.

Cutaneous tests were negative with the exception of a moderately positive reaction to horse dander. X-rays of sinuses showed a right maxillary sinusitis and an abscess at the root of the first upper right bicuspid. The extraction of this tooth and drainage of the antrum together with several injections of pituitary and adrenalin extracts at the time eradicated the asthma, and she has been free for two years. Her susceptibility to horse dander proteins was not sufficient to give any symptoms unless in close contact with horses.

F. W., a woman, age 35, has had a dry hacking cough associated with a wheezing bronchitis with exaggerated spells of bronchial asthma with acute colds, continually for twenty years.

Cutaneous tests gave a marked reaction to streptococcus hemolyticus and were negative to all other proteins.

X-rays of teeth showed a definite apical infection of four teeth. These were extracted and her infected tonsils were removed also.

Cultures of the tonsils gave a pure culture of streptococcus hemolyticus and the asthma which persisted for two months after the teeth and tonsils were removed, cleared up when careful immunizaton with the vaccine was carried out. She has remained entirely free from her asthma for over one year.

This case shows the necessity of desensitizing the patient to the bacteria which is producing the trouble, especially when a specific skin test is

present, even after the harborers of the bacteria have been removed.

E. B., a woman, age 52, has had asthma following pneumonia nearly continuously for twenty-four years with exaggerated attacks with colds. Raises much sputum. Occasionally sneezing and running of the eyes and nose occurs.

Cutaneous tests were negative except to staphlococcus aureus and orris root. Cultures of the sputum yielded a pure diphtheroid and immunization has given her marked relief for the last eight months.

Two cases of combined food and bacterial sensitiveness will be mentioned:

M. W., a woman, age 40, has had bronchial asthma continuously since childhood. As a child had hives.

Cutaneous tests were positive to wheat proteins and to orris root. Cultures of sputum showed a streptococcus and diphtheroid. Cutting the wheat from her diet and immunizing her with the vaccine is giving her relief.

G. H., a boy, age 6, has had very severe attacks of bronchial asthma since the age of six months, when vegetables were first added to his diet. He has always been wheezy and unable to play or run.

Cutaneous tests were markedly positive to carrot, corn and onion proteins and to staphlococcus aureus. His sputum yielded a pure culture of staphlococcus aureus.

Elimination of carrots, corn and onions from the diet did not relieve his wheezing until immunization to an autogenous staphlococcus vaccine was carried out and since then he has had relief. For the first time in his life he is able to play and run like other boys.

These last two cases illustrate the type which is originally sensitized to food proteins and where asthma becomes chronic because of an added bacterial infection.

One example of asthma due to foods alone is given:

B. W., a boy, age 8, has had many frequent attacks of bronchial asthma for several years.

Cutaneous tests showed marked reactions to carrots, rice and peanuts. Dr. Clifford Sweet reports complete relief since these foods were eliminated, with the exception of a slight attack when he broke over his diet.

An interesting example of susceptibility to foods, pollen and bacteria is cited.

P. T., a boy, age 10, has had severe attacks of asthma every ten or twelve days for the last three years and has never been absolutely free from difficult breathing. He has very little sputum.

Cutaneous tests gave positive results with the pollens of Kentucky blue, poa annua, barley, wheat, agrostis, and timothy grasses. Tests for wheat proteins, as well as wheat glutenin, leucosin, and globulin, corn, barley and beef proteins showed marked so-called delayed reactions. All other reactions were negative.

Immunization to the pollens, together with the elimination of the foods to which he was sensitive, and immunization to an autogenous vaccine, consisting of a streptococcus, gram negative diplococcus and staphlococcus aureus has given definite and gratifying relief. He can now play ball for the first time since asthma began.

In conclusion, certain points should be emphasized to assure correct diagnosis and success in the treatment of cases of hay fever and asthma.

1. A complete stock of proteins of foods, animal hairs, orris root, bacteria, as well as a large number of our California pollens is the first essential for correct diagnosis and treatment.

2. Ready access to a competent bacteriologist who can carefully prepare vaccines as needed for the treatment of these cases, is important.

3. The pollen type of hay fever receives marked relief by proper pollen therapy and this should be given with the local pollens only.

4. The bacterial types of asthma and hay fever receive striking and often rapid relief with autogenous vaccines.

5. Food types of these illnesses must be treated with absolute removal of the foods to which sensitivity exists to get results. Desensitization may then be tried.

6. Surgery is important if foci of infection are present or drainage is imperfect.

7. The writer feels that if care is taken and the patients co-operate, most of these sufferers can receive either partial or complete relief from hay fever and asthma.

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(511 Hutchinson Building.)

Prescribing Intoxicating Liquors—"The writing of prescriptions for intoxicating liquors for the fee or because the person is a good friend is not only illegal but dishonest, forfeits respect even from the recipient, and each time leaves the doctor one notch lower in self-respect."—(A. W. Abbott, Journal-Lancet, January, 1922.)

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STYLOID PROCESS IN TONSILLECTOMY

By J. A. BACHER, A. B., M. D., San Francisco

From the Subdivision of Otology, Rhinology and Laryngology of the Division of Surgery of the Stanford School of Medicine.

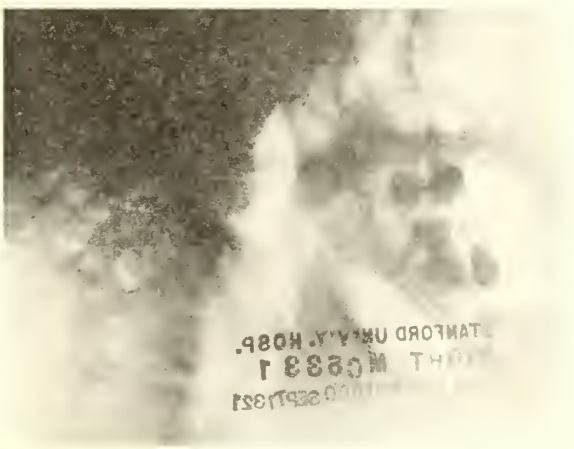
During the past five years two cases of elongated styloid processes, presenting in the tonsillar fossæ, have come under my observation. In neither of the cases was the diagnosis made before tonsillectomy. In the first case inspection of the fossa after uncomplicated tonsillectomy showed a sharp prominence covered with muscular tissue extending from above downwards rather close to the anterior pillar. In the second case a snare wire was placed around the process and an X-ray picture taken with the wire hanging from the process. Convalescence was uncomplicated in both cases.

I have found fourteen cases in the literature. Ten were discovered previous to operation and four on account of difficulty in the operative procedures. The prominence was removed with bone forceps in four cases. The characteristic movements that the styloid process, alone of the possible bones in this position, possesses are first that it moves with rotation of head, and second that it moves with nodding of the head.

In the cases discovered before operation there were exaggerated symptoms of chronic tonsillitis. In these cases part of the process has been removed with bone forceps. Other cases have caused difficulties in instrumentation. These cases deserve publication, as it is not commonly known that the styloid process can be so long.

CASE I—Elongated styloid process.

CASE II—Taken fifteen minutes after uncomplicated tonsillectomy. Wire snare hanging suspended from tip of styloid process in base of tonsillar fossa.



Normal Styloid Process.

WALTER LINDLEY, M. D.

(Born Monrovia, Indiana, January 13, 1852

Died Los Angeles, January 24, 1922)

Dr. Walter Lindley was one of the most widely known and most beloved physicians of the West. He was educated in Minneapolis and received his Doctor of Medicine degree from the Long Island College of Brooklyn, N. Y., and subsequently attended Keen's School of Anatomy, Philadelphia. He had been engaged in practice in California since 1875. During that time he was an outstanding figure in the medical world and became influential in the civic and economic affairs of the State. He had held all of the positions of honor that could be given to any member of his profession in California, and he was also a member and a director of the Los Angeles Chamber of Commerce. A number of banks and trust companies were honored by his membership on their boards of directors, and he was noted for his friendship and assistance to young men in all walks of life during the period when they were striving to get started in their careers.

Dr. Lindley leaves a widow, three daughters and one son, Francis Haynes Lindley, together with a host of warm personal friends who mourn his passing.

GLUCOSE AND ALKALIES IN SURGERY

By ALANSON WEEKS, M. D., and LEROY BRIGGS, M. D., Surgical Department, University of California Medical School, St. Luke's Hospital

The age of empirialistic medicine is practically closed. The present tendency is to find and remove the pathology of the disease instead of rendering symptomatic treatment. So much is this true that some of us stand so straight as to fall over backward, forgetting, at times, that: There is a patient who has the disease as well as the disease which the patient has. This is the natural sequence of the revolution which our medical schools have undergone. There is a striking difference in the courses of the modern school when compared with those of a few years past, and more especially is this true of pharmacology and therapeutics. Today stress is laid upon a few drugs of proved value, and possibly these proofs are too often entirely laboratorical. Fortunately, however, the importance of sanitation and proper nourishment is emphasized. Carbohydrates are our simplest foodstuffs and of these glucose is the simplest form, and its indications and methods of administration are definite. We shall not proceed with the chronological development of the details of the uses of glucose as is usual in such discussions, but shall endeavor to stick to the practical side of the subject. It will be necessary, however, to recall some chemical properties and the physiological activity of glucose to appreciate fully its indications and usefulness.

Glucose is a monosaccharid, crystalloid substance, forms true solution, diffusable through semi-permeable membrane, and, therefore, in solution, obeys all the laws of osmosis.

Physiologically, glucose is the form in which the carbohydrates are absorbed from the intestines after digestion is complete. It is taken up by the blood and transmitted to the liver, then to the tissues, to be utilized or stored (mainly in liver and muscles) in the form of the polysaccharide, glycogen. This store of glycogen is called upon when the katabolism exceeds the anabolism, as in starvation. This is the food of choice or organism. It has been shown repeatedly that the glycogen content of the liver and muscles is decreased during starvation, and also that further starvation results in an increase in the elimination of nitrogen proving a destruction of protein tissues of the body. The glucose is oxidized, forming compounds of lesser number of carbon atoms, which are further oxidized, so that the final metabolic products are carbondioxide and water, which is excreted by lungs, kidneys and skin.

Before proceeding further we wish to state that we are ardent advocates of the alkalinization of patients. All cases get an alkaline water before and sodium bicarbonate after operation.

INDICATIONS AND METHODS OF ADMINISTRATION

Glucose solution by rectum is indicated in all cases of dehydration and those who cannot take fluids or food for three days or more. This means, then, all cases of major operations, and more especially those in which the peritoneal cavity is opened. After any major operation there is a slight increase in the rate of metabolism evidenced by a slight rise in temperature due to increased nerve tension, absorption of toxins, products of antolysis of strangulated tissues, etc. At this time there is an increase in the katabolism and a standstill in the anabolism if the patient is not taking food. This results in a call upon the glycogen reserve first and tissues protein later if the glycogen is not replaced. This gives us a definite indication for carbohydrate food and it is best administered in the form of glucose, which will keep up the supply of glycogen with a minimum amount of dissipation of energy on the part of the patient. Five per cent glucose and 5 per cent sodium bicarbonate solution by rectum is used because this strength solution is practically isotonic with the blood and is readily absorbed.

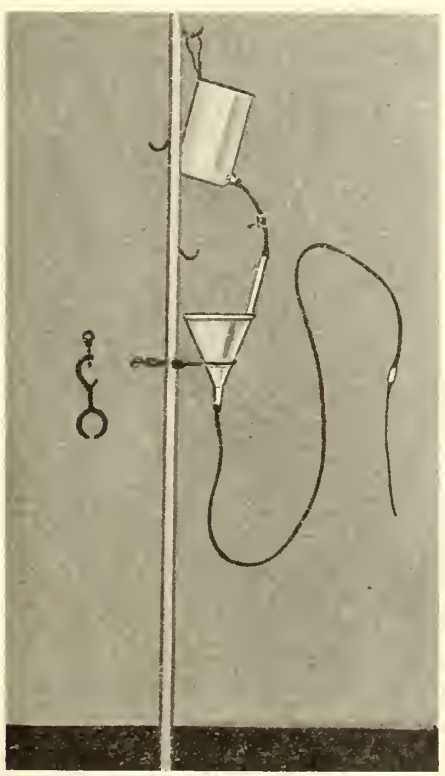
We hear an occasional objection by a physician on the ground that the solution irritates the patient and cannot be continued. This can readily be overcome if the method originated and published some years ago is adhered to. In rare instances it will be found that the patient develops a more or less severe diarrhea, probably due to an alkalosis. This can be overcome by discontinuing the soda in the solution and giving hydrochloric acid by mouth. The method previously published will be emphasized by repetition.

STANDING ORDERS

Before operation the patient's colon is thoroughly washed night and morning to remove all fecal matter. As soon as the patient has returned to bed from operation 16 ounces of the 5 per cent glucose and 5 per cent bicarbonate solution is thrown into the bowel and the patient is left alone for four hours, when the funnel method of giving the above glucose and bicarbonate solution is started. Have the funnel in its holder raised only above the level of the patient's rectum so that the fluid will be seen to rise and fall in neck of the funnel with the patient's breathing. This is the most important part of the method. Use a small catheter to insert into the bowel and pin the sheet over the rubber tubing with a safety pin so that the drag of the five feet of rubber tubing reaching from the catheter to the funnel will not drag the catheter out of the bowel. Allow enough of the above glucose and bicarbonate solution to flow into the funnel from the drip tank until the tube of the funnel is filled. This allows for filling of the bowel and a good view of the solution so that you can see whether it is rising and falling with the patient's breathing. Allow this to go on now for twelve hours' running in enough of the solution to keep up the level in the funnel, seeing that all the time the fluid rises and falls with the patient's breathing. Then begin every four hours to sit down by the bedside and flush the bowel out with warm tap water with

the same funnel and catheter for at least fifteen minutes at a time, raising and lowering the funnel until the bowel is washed free of fecal matter and gas. (It requires a great deal of patience at times and a longer and more frequent washing to have the gas start.) Then hang up the funnel and start the solution again for another four hours. If this is properly done the patient should suffer no inconvenience and there should be no collection of fecal matter and gas in the bowel, and the patient should never complain of gas pains, and at all times the gas has a free way to discharge out of the funnel, especially as the outlet of the catheter cannot be blocked with bowel content if the fluid rises and falls with the patient's breathing. A patient absorbs more fluid this way than by any other method. The catheter need not be disturbed in the rectum for three days, thus lessening the tenderness of these parts, and the nurse should by these means be saved much lifting and worrying of the patient.

In cases of all laparotomies the patient must be in the Fowler position immediately on return to bed from the operating room for at least twenty-four hours. Be sure that the body is on a slant toward the pelvis and not, as is so usual, only from the neck up. This is in order that all fluids



Apparatus to give the Murphy Drip by the Weeks Method.

or possible infection in the abdomen shall be gravitated toward the pelvis where it is the more readily handled by the peritoneum. If there is no intra-abdominal operation or injury the drip can be given to the patient in any comfortable position.

In cases of general peritonitis this method can be kept up for days without giving the patient anything by mouth, but perhaps a moderate amount of water from time to time.

After the patient has begun to pass gas freely through the funnel and plenty of fecal matter has collected in the lower bowel, showing the peristalsis has started and is emptying the small bowel into the large bowel, and the patient has no distress on taking liquids by mouth, the drip can be discontinued. If the patient again complains of gas on the stomach with nausea stop everything by mouth and start the drip again. Continue this until all stomach distress stops, when liquids can again be given by mouth.

If the patient vomits a great deal, try first a tumbler full of water with a teaspoonful of bicarbonate dissolved therein, to be drunk all at once. This will aid in washing out the stomach. If the vomiting continues a glass of ginger ale may be tried. If it still continues, particularly if any dark particles show in the vomitus, notify the doctor at once and make preparations to wash out the stomach.

If the patient complains of pain one-eighth grain of morphine may be given hypodermically and may be repeated three or four times during the first twenty-four hours, or as otherwise ordered.

The illustration pictures the apparatus for the Weeks' Drip. For adults use a seven-inch glass funnel and one-half-inch tubing five feet long with No. 16-18 French catheter. In infants and small children use a three-inch glass funnel and four feet three-eighths-inch rubber tubing with a very small catheter. The catheter is not to be removed from the rectum until the drip is to be discontinued entirely; the long tubing allows for irrigations of the colon by lowering and raising the funnel. If care is used this irrigation can be done while the patient sleeps, without disturbance, and the gas bubbles out of the funnel.

In the course of routine one occasionally meets a case that is urgently in need of fluids immediately. In these cases if the patient has been, for any reason, unable to take and retain sufficient nourishment and fluids by mouth or rectum, a glucose solution intravenously is indicated. For this purpose we give from 500-1000 ccs. of a 5 or 10 per cent solution. In all such cases the rectal drip is continued or started if not in use before. In critical cases of definite starvation, toxemia, diffuse peritonitis, etc., the above procedure is repeated every twenty-four hours as long as needed. Warning should be sounded here in regard to giving large volumes of fluid in the blood stream if the myocardium is weak or if there are pulmonary complications which might offer great resistance to the heart. The solution must be given very clowly, 40 to 60 minutes being taken for the infusion.

There is another type of case which is often overlooked, namely, Hepatic Insufficiency, in which glucose is a specific. This condition, first studied

and described by Bevin and Fovill, is characterized by the following symptoms:

A history of lack of nourishment, icteric tinge to sclera and skin, dry tongue, acetone breath, faces apathetica, restlessness, in fact the patient often cries out, though in a semi-comatose state in the last stages. Following death in such cases the liver and muscles are practically glycogen free, and experimentally this entity has been produced and cured by the use of carbohydrates. In these cases 20 to 25 per cent solution of glucose is given continuously in the vein, care being taken to keep within the tolerance of .8 gram per kilo per hour, usually about 60 grams per hour in the average adult. By this method one can furnish as much as 5000 calories in twenty-four hours without effort on the part of the patient. To see these cases improve and their appetite develop is most gratifying. It is important to keep the temperature of the solution between 102 and 108° F.

In baby surgery and especially in dehydrated and starved cases of Congenital Pyloric Stenosis we use a 3 per cent glucose solution in drachm quantities by mouth, beginning as soon as the patient regains consciousness from the anesthesia. In critical cases we also use the same strength solution hypodermically in both axilla and groin. It is slightly irritating, but with care in the technique there is no abscess formation. Weeks' Drip is given continuously in these cases, 3 per cent soda and 3 per cent glucose, care being exercised in selecting a small funnel, small tubing and a very small catheter.

In cases of suppression of urine following nephrectomy, trauma, eclampsia, etc., the results are often just short of miraculous. Here one must use a concentrated solution of from 25 to 50 per cent and give from 300 to 600 ccs. to the average adult. The rational of this treatment is found in the fact that glucose is a strong and efficient diuretic. Normally there is from .08 to .18 per cent of glucose in the blood, and if this percentage is increased there is rapid and marked diureses, with the urine containing the usual constituents plus some sugar. Some of these cases of suppression with uremic symptoms, with anuria from 3 to 5 days, will, after a single injection, secrete 1500 ccs. or more of urine within the first twenty-four hours and rapidly go on to recovery. The hypertonic solution increases the concentration of sugar in the blood and this stimulates the kidneys to function. By osmosis the fluid is attracted from the tissues into the blood stream and thus accumulated toxins are eliminated. If the patient is dehydrated it is well to give 1000 to 1500 ccs. of hypotonic sodium chloride solution by hypodermoclysis about one hour previous to the administration of the glucose solution intravenously. Attention to the modus operandi of the efficiency of this measure will make it plain that conservatism here will not produce the results. A solution of at least 25 per cent must be used and give from 300 to 600 ccs. depending upon the strength of the patient's heart for a guide in each case.

"REACTIONS"

We seldom see a "reaction" from the intravenous use of glucose solution, but great care is exercised in the preparation of solutions and in the temperature at which they are given. We use Merck's Anhydrous Dextrose and make a 50 per cent stock solution in doubly distilled water. From this stock solution the different strength solutions are made by dilution with fresh doubly distilled water and sterilized in the Autoclave at 120° C. for twenty minutes. In boiling a solution of glucose there is a slight ionization which renders the solution faintly acid, but this has not caused alarm. However, at the suggestion of Dr. Langley Porter, we now add Fisher's Solution in proportion of 1 to 10 to overcome this possible objection. The solutions, of course, must be sterilized separately and mixed after cooling, otherwise caramel is formed. This has not been introduced in our procedure for sufficient number of cases to make a statement as to its value, but is, we believe, a very rational addition. Too much stress cannot be laid upon the importance of giving the solution at proper temperature. We always use a tubal thermometer placed in the tube about eighteen inches from the needle in the vein and the temperature is kept between 102 to 108° F. We discovered that at some of our best regulated hospitals the intravenous administration of solutions was practiced without the use of a thermometer, and the solutions under such circumstances were given too cool for fear of giving them too hot. We also use old rubber tubing, since some writers believe reactions are often due to new tubing.

We wish to emphasize the importance of following the details as outlined above if results are to be expected. It is altogether too frequent that useful methods in the treatment of disease are abused because of carelessness or indifference to the following of necessary details.

We are not unmindful of the work of Henderson and Haggard, but we believe that until we have been able definitely to work out clinically the blood chemistry as related to its acid or alkali demands more patients will be benefited than are overalkalinized.

CONCLUSIONS

Glucose and the alkalies are valuable adjuncts to the surgeon's armamentarium. Three things are vitally essential if the patients are to be tided over the period of lowered resistance:

1. Proper amount of food for the cells in usable form.
2. Proper amount of water, and
3. Proper chemical medium for the tissue cells.

If the above methods are closely adhered to there will be less frequent administration of the futile "shots" of strychnin, camphor, etc., for cardiac failure.

YOSEMITE'S CLIMATE

Although Yosemite was discovered by a member of the medical profession, there are few medical men that know the varied charms of this incomparable valley. It will be of keen interest to those professional men in whose hands lies the health of the State and who will visit Yosemite next May at the annual convention of the Medical Society of the State of California, to find Yosemite's climate, at an altitude of approximately 4000 feet, as distinctive of California as the climate of the coast. Abundant statistics about it may be given, but the best idea of it will be conveyed by an incident of the present season, wherein the human element is more evident than in plain figures.

Two representative residents of Cleveland, Ohio, came to California eager to see the Yosemite, which they had seen pictured in their school histories and geographies, but they were fearful that the trip meant a return to Ohio, insofar as weather was concerned. And they had come to California to bask in the sunshine. Nevertheless, the lure of El Capitan and Half Dome was too strong to be resisted; so they bought their tickets and started to the park, intending to poke their noses inside the "Gates of Yosemite," take one chilly look around and then scoot back to warmer climes.

The beautiful ride from El Portal to Yosemite Valley thrilled them as it thrills everybody—and they were not cold. After luncheon they went outdoors and discovered other guests preparing to ride horseback or to go sightseeing or to walk, while some sat on the veranda in the sun, knitting or reading or just resting. And still they were not cold. It seemed curious, but they forebore to ask questions and began to consider extending their stay.

Next day the sun was as warm as ever, there were other interesting things to do, they were completely comfortable. When finally they departed, the two Clevelanders had spent fifteen days in the valley and left an unsolicited testimonial telling of their pleasure in the visit. As the patent medicine advertisements say, "Original can be seen on request." But perhaps that isn't a recommendation in the eyes of professional men! Anyway——

"We never knew a mountain winter like this," the visitors confessed to someone, and therein lies the best description of "Yosemite, A Winter Resort," that could be penned by anybody. It is different. It is in California.

Is there snow? Yes, plenty of it—sometimes more. The ground was covered with three feet of fluffy, dry powder when the Clevelanders were in the valley. There was more than three feet late in January when the thermometer in the sunshine on the Sentinel Hotel veranda registered 85 degrees. It isn't a trick thermometer either. Government records show an average maximum temperature for the winter months of 54 degrees, and that is not in the sunshine. Night temperatures fall much lower, just as anywhere else in the West; but in the daylight hours, the time when everybody is out exercising and laying up strength and quieting jangled nerves, the temperatures are balmy and delightful, even for the aged and infirm.

The reason for this unusual climate is not strange or remarkable. If it were not for the fact that the unthinking public associates mountains with cold weather in winter, regardless of whether the mountains are in Switzerland or California, there would not be so much misunderstanding to overcome in attempting to introduce Yosemite at this season.

Speaking literally, not figuratively, Yosemite Valley is a hole in the ground. It is one of the most unique holes the world has ever known, with walls of stupendous height, in some places higher than the valley is broad. Wind virtually is unknown in the valley. The sun beats down all day long, until this hole in the ground becomes a veritable natural sun parlor. And here is something that usually makes everybody laugh, but scientific men say it is true, just the same. The sun is warmer, so to speak, in Yosemite than it is elsewhere, because the glacier-polished granite of the cliffs reflects the rays into the valley until the temperature is far higher than it would be without them.

Finally, the air of Yosemite is pure and dry and rare. There is none of that chilly dampness which takes the joy out of life.

A writer described a visit to Yosemite during the cold wave which made the coast shiver and long for furnace heat. He made the statement that a temperature in Yosemite 20 degrees below that in the San Joaquin Valley offered no discomfort, while the people in the "warmer" sections of the State were talking about nothing but the cold weather. His experience and statement were duplicated many times. At a snow carnival early in February, spectators stood on the crusty top of a yard of packed snow watching the races, and complained that they were too warm wearing the topcoats to which they were accustomed in the cities.

To say more about the climate would be mere repetition with only a change of details. It should be added here, however, that any winter climate demands good food and a good place to sleep after the exertions of the day. Visitors have no cause to complain on either score.

Yosemite is open and accessible by way of Merced and El Portal every day in the year.

CAMP CURRY'S ATTRACTIONS

Spring—and in Yosemite! Do you remember how the crimson maple buds began to unfold, back East in the spring, after the snow was gone? And when the first violets emerged from the green of their leaves, and the moist brown pine needle carpet of the woods? Do you know the "feel" of the air, when the sun has driven winter away and life begins to creep upward with the green sap? Take a week and learn what it can mean, or summon it back from the limbo of your memory. Breathe air that has the tang of mountain nights and days.

The Yosemite Valley was still a good deal of a wilderness when Camp Curry's site was chosen, over twenty years ago. Yosemite Village, to be sure, was very much the same collection of frame structures that it is now, many of them dating back to the seventies or eighties. But with all the valley to choose from, this spot in the heart of Yosemite, set about with pines and firs and cedars of noble growth, between the river in one of its green and tranquil moods and the sheer granite wall of Glacier Point, took the eyes and hearts of the beholders.

Have you ever lived the free and easy out-of-door life that Camp Curry offers you? A life that puts ostentation into the discard and becomes simple and healthful and care-free? Yet there is comfort everywhere—in the bungalows, fitting harmoniously into the forest background; in the tents set in clusters among the trees, hedged about by dogwood and azalea and wild lilac in never-ending succession of flowering loveliness; in the central buildings, with their boulder-set fireplaces.

The bungalows afford living quarters unexcelled on the floor of the valley. There are wide porches from which to watch the shifting beauties of sun and shadow among the trees and along the cliffs, rooms whose walls are half windows, comfortable beds, and the most modern of sanitary appointments. The bungalows and some of the tents are equipped with electric heaters, and there is electric lighting throughout the camp.

Camp Curry's tents offer the accommodations of the usual hotel room without bath attached. Twin or double beds, a board floor with grass rug, washstand and dresser of adequate size, are the princi-

pal furnitnre. As in the bungalows there is electric lighting, and the beds are a point of pride with Camp Curry for comfort.

The central plant consists of an auditorium and dance hall with an excellent floor of hard maple, club rooms with bowling and pool, a main office and writing room, postoffice, telegraph, a delightful sunny studio with a splendid collection of photographs, in part the work of George Fiske, a pioneer photographer who lived in Yosemite for forty years and caught its reflections as no other has done, and in part the work of Camp Curry's own photographers. The dining room is comfortably warmed by steam heat and has a capacity of 800. The laundry is an attractive building, in the same unit with bathhouse and a swimming pool where Duke Kahanamoku, George Freith and other champions have met. The storage garage and a storehouse, which will make possible greater efficiency and better service for Camp Curry's guests, are the most recent additions to the main plant.

So much for physical comfort and convenience. But Camp Curry is more than a hotel or camp; it is an institution, a California institution that has taught scores of thousands the joys of outdoor life, and that comfort and camping can go hand in hand. The one great factor to this end has been the spirit of hospitality prevalent from the beginning, under the personal management of its owners. You will find here people who are thoroughly familiar with what the valley has to offer and eager to make your outing one that will linger long in your mind. Courteous and intelligent service ungrudgingly given by young college people is an important item.

The campfire is the symbol of this intimate and cordial welcome. Beside it the informal program is given nightly, brought to a close that is always beautiful and impressive by the firefall from Glacier Point. The dance follows for those who will; for others, the circle narrows around the campfire in friendly talk, or there may be a moving picture from Camp Curry's fine collection, with hints of what to see and how to see it, and glimpses of beauties that lie beyond this gateway to the Sierras.

This is the year of years for Yosemite. All winter long the snows have been piling up in great masses, drifting under the trees, swooping down the canyon sides in avalanches, covering high mountain peaks and frozen blue lakes—for you! There will be moonlight on the swirling mists of waters, and that rare thing upon the earth, the lunar rainbow, circling the Yosemite Falls. The sun will pierce with brilliant light the rockets of Nevada and play a merry game of kaleidoscopic colors in the wind-blown spray below Vernal; and throughout the course of the valley and on down the rocky canyon the Merced will beat and snap and foam about the debris of centuries.

THE ST. LOUIS MEETING OF THE AMERICAN MEDICAL ASSOCIATION

The May meeting of the American Medical Association at St. Louis promises well toward being the largest in attendance of any of the Association's sessions. Since the publication of the hotels in the Journal of the Association in December, inquiries and reservations are being made daily. The hotels and the Conventions Bureau are aiding the Committee in a most satisfactory and helpful way to see that the Fellows are comfortably housed and accommodated. The A. M. A. meetings tax all cities entertaining them to the limit of hotel capacity. Whenever possible a good Fellow should double up so that no one is left without comfortable lodging.

Reservations should be made by communicating direct with the hotels. If satisfactory arrangements cannot be made in this way, write to Dr. Louis H. Behrens, Chairman Committee on Hotels, 3525 Pine Street, St. Louis, Mo.

ST. LOUIS' LEADING HOTELS (ALL EUROPEAN PLAN), THEIR LOCATION AND RATES

Hotel, with Number of Rooms	Street Address	Without Bath		With Bath	
		Single	Double	Single	Double
American, 275	7th and Market Sts.	.....	.....	$2.50-3.00	$4.00- 6.00
Diseases of Children					
American Annex, 225	6th and Market Sts.	.....	.....	2.00-3.00	3.00- 6.00
Pathology and Physiology					
Pharmacology and Therapeutics					
Beers, 114	Grand and Olive Sts.	$1.50	$2.50	2.00-2.50	3.00- 3.50
Brevort, 50	4th and Pine Sts.	.....	.....	2.00	3.00
Cabanne, 43	5545 Cabanne St.	.....	.....	12.00-37.50*	
Claridge, 350	18th and Locust Sts.	.....	.....	2.50-4.00	4.00-10.00
Obstetrics, Gynecology and Abdominal Surgery					
Hamilton, 160	Hamilton and Maple Sts.	.....	.....	2.00-2.50	3.50- 4.00
Jefferson, 400	12th and Locust Sts.	2.50-3.00	4.00	3.00-8.00	6.00-10.00
Surgery, General and Abdominal Orthopedic Surgery					
Laclede Hotel, 265	6th and Chestnut Sts.	1.50-2.00	2.50-3.00	2.50-3.00	3.50- 4.00
Majestic, 200	11th and Pine Sts.	.....	.....	2.50-3.00	3.50- 4.00
Dermatology and Syphilology					
Nervous and Mental Diseases					
Marion Roe, 200	Broadway and Pine Sts.	.....	.....	1.50-2.00	3.00- 4.00
Marquette, 400	18th and Washington Sts.	2.00-2.50	3.00-3.50	3.00-3.50	4.00- 6.00
Laryngology, Otology and Rhinology					
Maryland, 240	9th and Pine Sts.	2.00	3.00	2.00-3.50	3.00- 5.00
Gastro-Enterology and Proctology					
Urology					
Planters, 400	4th and Pine Sts.	2.00-2.50	3.00-3.50	2.50-5.00	4.00- 8.00
Ophthalmology					
Plaza, 200	3300 Olive St.	.....	.....	2.00-2.50	3.50- 5.00
Roselle, 100	4137 Lindell Blvd.	.....	.....	1.50-2.50	2.50- 3.50
St. Francis, 120	6th and Chestnut Sts.	1.50-2.00	2.50-3.00	3.00-4.00	4.00- 5.00
Statler, 650	9th and Washington Sts.	.....	.....	3.00-7.00	5.50- 9.50
Practice of Medicine					
Stratford, 100	8th and Pine Sts.	1.50	2.50	2.50	3.50
Terminal, 100	Union Station	1.50-2.00	3.00	3.00-3.50	5.00
Warwick, 200	15th and Locus Sts.	.....	.....	2.00-4.00	4.00- 6.00
Stomatology					
Preventive Medicine and Public Health					
Westgate, 125	Kingshighway and Delmar Sts.	2.00	2.50	3.00	3.50

* Weekly rates only.

COUNTY SOCIETIES

Alameda County Medical Association (reported by C. L. McVey, secretary)—A meeting was held on the 16th of January at the Public Health Center. Clarence DePuy, M. D., was in charge of the meeting, introducing W. A. Wood, who read a paper upon "Abnormal Conditions Found in the New-Born." E. Spense DePuy demonstrated X-ray plates of a tuberculous kidney. E. N. Ewer's paper was "Radium Treatment of Uterine Fibroids." These papers were discussed by Sargent, Adams and Jelte.

Miss Florence Atkinson, secretary of the California Association of Physiotherapists, spoke upon the work which the trained physiotherapists are attempting in the treatment of cases upon the prescription and under the supervision of physicians.

George W. Crile of Cleveland, Ohio, was the speaker at the annual banquet of the society, at the Hotel Oakland on February 15.

At the January meeting of the Merritt Hospital Staff Council, A. M. Smith reviewed the literature of arthritis deformans. The frequent association of achylia gastrica with this type of arthritis was noted. C. A. Dukes presented a new type of apparatus for the fixation of certain types of compound fractures. Officers elected for the year 1922 were: President, George Rothganger; vice-president, A. M. Smith; secretary, Robert Glenn.

Butte County Society (reported by J. O. Chiapella, secretary)—At the annual meeting of the society held in January, the following officers were elected for the ensuing year: President, Joseph P. Schell; vice-president, Thomas B. Reardon; secretary-treasurer, J. O. Chiapella; censors, P. L. Hamilton, J. P. Schell, W. E. Poole; program committee, Schell and Chiapella.

Contra Costa County Medical Society (reported by L. St. John Hely, M. D., Secretary)—The January meeting was held in the offices of Drs. Cunningham and Carpenter at Richmond. Routine matters were attended to at the meeting, and E. R. Guinan, M. D., 1002 Macdonald avenue, Richmond, was elected to membership.

Fresno County Medical Society (reported by Thomas F. Madden, secretary)—The February meeting was held at the commercial club on February 7, 1922. Those present were: President G. W. Walker, Madden, Kjaerbye, Schiro, Sheldon, Tupper, Anderson, Cross, Weise, Staniford, Broemser, Barrett, Tillman, Trowbridge, Sciaroni, McConnell, Willson, Couey, Miller, McPheeters, Stein, Aller and Montgomery.

Paul Campichi of San Francisco presented the subject of "Goiter, Classification and Treatment." Tupper, Cross and Anderson took part in the discussion.

Marin County Medical Society (reported by Chester A. DeLancey, M. D., secretary)—The annual meeting and banquet was held at Pastori's on January 21, and the following officers were elected and installed for the coming year: President, J. H. Kuser, M. D.; vice-president, L. L. Stanley, M. D.; secretary, Chester A. DeLancey, M. D.; delegate to State Meeting, A. H. Mays, M. D.; alternates, H. O. Howitt, M. D., and H. O. Hund, M. D.; trustees, Doctors Kuser, Howitt and Hund.

The evening was spent in discussing the "Political Situation as it Affects the Medical Profession and Marin County in Particular."

W. F. Jones, M. D., member of our society, is a candidate for the Assembly for Marin County.

Mendocino County Medical Society (reported by Paul J. Bowman, secretary)—The annual meeting of the society was held at Fort Bragg on the 8th of February. The following officers were elected: President, Lew K. Van Allen; vice-president, F. McLean Campbell; secretary-treasurer, Paul J. Bowman.

Hans Lisser, M. D., of San Francisco, discussed the subject of toxic and non-toxic goitre.

Merced County Medical Society (reported by Brett Davis, M. D., secretary)—The February meeting was held on the 2nd in the offices of the secretary. A. C. Reed of the extension service of the State Society was present and presented the subject of "Heart Disease in Every Day Practice."

The directors of the Mercy Hospital Association of Merced have secured a site and the payments for stock subscribed are about half completed. The directors expect to select an architect shortly and prepare to build the hospital in the spring.

San Bernardino County Medical Society (reported by E. J. Eytinge, M. D., secretary)—The February meeting was held Tuesday, February 7, with thirty members and ten visitors present and forty members absent.

"The Clinical Significance of the Basal Metabolic Rate Determination" was presented by Nelson W. Janney, M. D., of Los Angeles. The entire evening was spent in the discussion of endocrine and metabolic diseases, led by Dr. Janney.

Floyd Wm. Gardner of Loma Linda was elected to membership.

Sacramento County Society (reported by Dr. G. J. Hall, secretary)—The annual meeting of the Sacramento Society for Medical Improvement was held on Tuesday, December 20, and a special meeting of the Board of Directors was held on January 4. An amendment to the constitution and by-laws was passed and made effective.

The following officers were elected for the coming year: President, Dr. G. P. Dillon; Dr. B. F. Howard, vice-president, and Dr. G. J. Hall was re-elected secretary. The following directors were elected: Dr. Schoff, Howard, Dillon, Foster, Pope and Henderson. Delegates to the State society meeting: E. C. Turner and E. T. Sullivan Jr.; Dr. S. E. Simmons was re-elected a member of the Executive Committee.

The annual dues of the society were increased from $12 a year to $15, in order to pay the expenses of the secretary to all State medical meetings.

San Diego County Medical Society (reported by Robert Pollock, M. D.)—The San Diego County Medical Society has again outgrown its quarters and has accepted the invitation of Mr. C. S. Holzwasser to meet in the auditorium on the eighth floor of his new store building, at Fifth street and Broadway. Such meetings as are not of a clinical nature will hereafter be held at this place. Clinical programs will continue to be furnished at St. Joseph's and the County General Hospital.

A joint meeting of the Medical Society and the Medical Staff of St. Joseph's Hospital was held at the hospital auditorium Tuesday evening, January 24. P. M. Carrington gave an interesting résumé of the work of the League for the Conservation of Public Health and urged the support of the profession. Interesting reports of cases of "Meningeal Irritation in Influenza and Simulating Meningitis" were given by C. L. Stealy. A paper on the "Diagnostic Limits of the X-ray" was read by W. O. Weiskotten and discussed by Dr. Churchill.

Bobbitt, of the navy, reported a case of multiple tumors of the cerebellum, which was discussed at some length by Little, Hummel, Thompson, Oatman and Burger.

Dr. O. G. Wicherski has just organized the med-

ical staff of the San Diego County General Hospital for 1922. Three principal groups of service are recognized—General Medicine, Surgery and Laboratories. Each is organized with a chief of clinics and section officers.

San Francisco County Medical Society Meeting of January 10 (reported by L. H. Briggs, M. D., Secretary)—The entire meeting with about 150 members present was devoted to a discussion of the various phases of the diphtheria problem. Charles Fleischner spoke extemporaneously on the importance of the subject from the standpoints of contagiousness, treatment, and of epidemiology.

Wm. C. Hassler, M. D., presented a paper on the work of the Municipal Department of Health in the control of diphtheria. Hassler's conclusions are:

"1. Don't wait for a laboratory diagnosis when the case is clinically one of diphtheria. The laboratory test may be negative because of no growth and except in doubtful cases, is only confirmative if possible.

"2. Administer a large dose at once, of antitoxin preferably into the vein, next into the muscle, but never just under the skin.

"Frequently physicians inquire what should be the dose of antitoxin. This has been settled fairly well by Schick, who advises the administration of 100 units for approximately each 2 1 5 pounds of body weight and 500 units for the same weight in the very severe and late cases. Administer the antitoxin preferably into the vein, next into the muscle, but never just under the skin.

"3. As a procedure of safety, before giving antitoxin, question as to previous doses at any prior illness or as to being afflicted with asthma, urticaria, and always examine the heart. In cases that give a history of urticaria the patient should be desensitized by giving first a half cc. of antitoxin under the skin, and one hour thereafter half cc. of antitoxin into the muscle, and then repeat this process, doubling the dose every hour until the required amount of antitoxin is administered necessary for the status of the case. In cases where heart complications exist, intravenous medication is contra-indicated.

"4. Treat the disease as serious to the life not only of the patient, but of all contacts and the community.

"5. Suspect every child with temperature, sore throat, or running nose, and even a slight degree of aphonia, as being a case of diphtheria until the laboratory has decided otherwise."

W. H. Kellogg, M. D., director of the Bureau of Communicable Diseases, State Board of Health, presented a paper on the "Prevention of Diphtheria." Among other points Kellogg emphasized the public health responsibility of physicians when called to treat patients suffering from diphtheria.

"1. He should realize that cases of apparently simple sore throat may be diphtheria and should always take a swab.

"2. If the case shows any toxic symptoms, or is at all suspicious of diphtheria, he should never wait for the laboratory report before giving antitoxin, particularly if the examination is made at a State laboratory when the delays of the mail are serious.

"3. Having determined to give antitoxin, as many units should be given at one dose as will be required for the cure of the case as near as it can be estimated; the idea being to give at the first dose enough antitoxin to neutralize all of the toxin that is free in the circulation, as well as all that will be produced in the next three or four days.

"4. He should passively immunize other members of the family according to circumstances, as follows: If he is dealing with intelligent people and is in close touch with the family, he may apply the Schick test to the other children, awaiting the result and giving an immunizing dose of antitoxin to those found Schick positive. If for any reason delay could result between the development of a second case and his immediate notification thereof, he should give antitoxin to all the contacts. When antitoxin is used in this manner the physician should never forget that passive immunity does not prevent the carrier state and that the protection disappears in two or three weeks, at which time any carrier may become infected. This frequently results in a second death in the family, the people believing that the second case is not diphtheria, owing to the previous immunization, and therefore fail to call the doctor promptly. Active immunication by toxin-antitoxin is not applicable to the protection of persons recently exposed, as the immunity following is of slow development.

"5. The physician should instruct the family in the importance of strict isolation of the case from the rest of the family. Where possible, the attendant of the sick child should not associate with the well children, as she is almost sure to become a carrier. They should be instructed to collect and burn all secretions from mucus membranes of the patient, to keep separate, clothing, bedding and eating utensils.

"6. Finally, he should preach continually among his patients, the active immunization of children against diphtheria."

No notice of the other papers presented at this program are given because neither paper nor abstract has been submitted to the editor.

There was a meeting of the Committee on Industrial Medicine on January 17, for a discussion of the free choice of physicians in industrial accident cases and discussion of the fee schedule. The principal speakers were W. H. Pillsbury, attorney for the Industrial Accident Commission; Morton Gibbons, Gayle G. Moseley, James Eaves and G. W. Goodale.

The Committee on Eye, Ear, Nose and Throat met on the 24th of January. Abstract of the proceedings has not been received.

The Committee on Urology met on January 31. The only abstract received was of the paper presented by M. B. Wesson, M. D., on "Studies of Trigonal Area of the Bladder." The author called attention to a compensatory hypertrophy of the trigon in cases of obstruction at the vesical orifice due to overexercise of the trigonal muscle in opening the vesical orifice. A corresponding atrophy follows the removal of the obstruction (prostatic hypertrophy or median bar). The trigon may be dissected from the bladder wall in cases of tuberculosis and have to be removed with a resultant incomplete and difficult micturition; with removal of one-half of the trigon the remaining half functions and the bladder can be entirely emptied. The same is true when the trigon is split; however, a split trigon is not functionally as perfect as one with Mercier's bar intact.

The obstruction due to a hypertrophied trigon can be removed: (1) Intra-urethrally, by means of a punch or a trigonotome; (2) perineally, by means of a scalpel or trigonotome; (3) suprapubically, by means of a scalpel and scissors. The latter method is the operation of choice, since hemorrhage can be controlled.

With the removal of all vesical obstructions and the preservation of a maximal amount of the trigon, the untoward symptoms disappear and practically perfect function is restored.

San Joaquin County Medical Society (reported by Dewey R. Powell, M. D., Secretary)—The regular meeting of the San Joaquin County Medical Society was held Friday evening, January 13, at the State Hospital. Those present were: Hudson Smythe, president; Minerva Goodman, Grace McCoskey, J. G. Vischi, B. F. Walker, H. E. Sanderson, E. A. Arthur, F. J. O'Donnell, J. J. Tully, L. R. Johnson, C. F. English, B. J. Powell, H. E. Price, R. T. McGurk, L. Haight, J. P. Hull, Margaret Smythe, F. P. Clark, H. S. Chapman, W. P. Lynch, W. T. McNeil, R. R. Hammond, A. H. McLeish, C. R. Harry, F. J. Conzelman, J. T. Davison, E. L. Blackmun, Hudson Smythe and D. R. Powell, with H. L. Gregory of Stockton, Captain Day of the Army Medical Corps, Stanley Stillman and Walter Scott Franklin of San Francisco as guests of the evening.

The first speaker of the evening was Walter Scott Franklin, M. D., Professor of Ophthalmology at the University of California, who spoke on "Strabismus." The speaker emphasized particularly the fallacy of the adviee formerly given by the family physician to wait in these cases before instituting treatment; that they would outgrow it or else there would be time enough to attend to it when the child should grow older. He spoke of the excellent results that could frequently be achieved by taking the child just as soon as the danger was in any way noticed, the important thing being the preservation of the vision, which otherwise would be impaired from disuse if the eye were not corrected early. He spoke particularly of the advantage of covering the good eye and foreing the weaker eye to do the work, and in that way educate the weak muscles. Franklin concluded his remarks by reiterating the importance of attending to strabismus eases early in young children. The paper was discussed briefly by B. F. Walker, B. J. and D. R. Powell.

The next speaker of the evening was Stanley Stillman, Professor of Surgery at the University of California, who spoke on "Difficulties of Gall Bladder Surgery." He mentioned first the cases of acute cholecystitis and the question that always arose as to whether to treat the case medically or surgically. In his experience a number of cases had gone along very nicely without operation and it was advised when the acute symptoms seem to be subsiding to defer surgical procedure, but if the symptoms progressed to operate at once. He spoke of the inefficiency of the X-ray as aiding in diagnosing gall bladder conditions and cited several instances where the X-ray was positively misleading. He mentioned the danger of operating in cases of gall bladder in suspected focal infection and cited that in a number of apparently normal gall bladders there were oftentimes severe postoperative eonditions. He spoke of the old question of drainage and stated that he felt safer in eases of severe infection to have a drain, particularly where there was distinct hepatitis in association with the gall bladder trouble.

The members present discussed the paper and Stillman very courteously answered a number of questions. The president thanked the visitors on behalf of the society for their courtesy in presenting such splendid papers.

Santa Barbara County Medical Society (reported by Alex. C. Soper, Jr., M. D., Secretary)—The annual meeting and banquet was held January 9. Walter V. Brem, M. D., Wm. T. McArthur, M. D. of Los Angeles, and E. S. Kilgore, M. D. of San Francisco, all presented papers before the society.

The following offieers were elected for 1922: President, William J. Mellinger, M. D., Santa Barbara; vice-president, Harry L. Schurmeier, M. D., Santa Barbara; first vice-president-at-large, J. C. Cummings, M. D., Carpinteria; second vice-president-at-large, Wm. T. Lucas, M. D., Santa Maria; secretary-treasurer, Alex. C. Soper, Jr., M. D., Santa Barbara.

At the meeting of January 23, Charles Stivers, M. D., of Los Angeles, discussed "Speech Defects" with presentation of cases. Horace F. Pierce reported a patient suffering from Primary Splenomegaly.

Construction has been started upon the new children's wing of the Cottage Hospital. This is to cost $50,000 and is the gift of Mrs. William H. Bliss.

The St. Francis Hospital is out on a campaign for funds to build their new hospital.

There is a barber shop in the San Marcos Building at Santa Barbara that sterilizes every hair brush after it is used.

Santa Clara County Medical Society (reported by E. P. Cook, M. D., Secretary)—The January meeting of the society was held at O'Connor Sanitarium on the 18th. Thirty-eight members were present, including four from Gilroy and three from Palo Alto; seventy-two were absent.

J. L. Pritchard, M. D., discussed the new hospital records and staff rules of O'Connor Sanitarium. He stated that a new record room had been prepared and that hereafter O'Connor Sanitarium will keep and index records. O'Connor Sanitarium is also installing a Sanborn apparatus for the determination of basal metabolism.

A. J. Baiocchi, M. D., reported a case of carcinoma of the stomach in a woman thirty-one years of age. The case was interesting from the standpoint of diagnosis with particular reference to carcinoma and syphilis. Exploratory operation was refused and the patient reacted unfavorably to salvarsan. Subsequently an exploratory operation was performed and carcinoma was found.

M. D. Baker, M. D., read a paper on the various conditions affecting the pelvis. J. H. Shepard, M. D., demonstrated basal metabolism methods and discussed the value of basal metabolism determination in various thyroid conditions.

New members elected are: Alson A. Shufelt, M. D., graduate of the University of California Medical School, 1917, office Bank of Italy Building, San Jose; practice limited to Obstetrics and Gynecology. Donald G. Davy, M. D., graduate of the Stanford University Medical School, 1920; resident physician and surgeon of the Santa Clara County Hospital at San Jose. Charles L. Ianne, M. D., graduate of the College of Medical Evangelists, Los Angeles, 1921; intern at Santa Clara County Hospital, San Jose. W. L. McWhirter, M. D., graduate of the University of Texas, 1917, was elected to associate membership in the County Medical Society; Dr. McWhirter is the resident pathologist at O'Connor Sanitarium and is a member of the Texas State Medical Society.

The final plans for the new San Jose Hospital have been aceepted and specifications are now being completed by the architects.

Solano County Medical Society (reported by A. V. Doran, secretary)—The February meeting was held on the 14th at the Vallejo General Hospital, with eight members present and nine absent. The following officers were elected for the ensuing year: President E. B. Todd; vice-president, R. E. Allen; secretary-treasurer, A. V. Doran.

The Vallejo General Hospital is nearing completion. The county is at present without any faeilities for isolation or treatment of communicable diseases.

Sonoma County Medical Society (reported by N. Juell, M. D., Secretary)—The January meeting was held in Dr. Fisher's office at Santa Rosa with eight members and three visitors present.

G. W. Pierce, M. D., discussed plastic surgery and, after the dinner which was part of the program, there was a general discussion of social medicine.

Yolo County Medical Society (reported by Lela J. Beebe, M. D., Secretary)—The December meeting was held at Woodland on the 13th with the following members present: W. E. Bates, L. J. Beebe, W. J. Blevins, M. B. Bransford, C. H. Fairchild, F. R. Fairchild, J. L. C. Goffin, H. R. King, J. P. McManus, F. L. Newton, C. A. Poage, M. W. Ward.

The scientific program of the evening consisted of a "Demonstration of Metabolism Methods," by L. J. Beebe, M. D.; "Diagnosis of Hypo and Hyperthyroidism," by W. E. Bates, M. D.; "Surgical Treatment of Thyroid Disorders," by F. R. Fairchild, M. D.; "X-ray Treatment of Thyroid Disorders," by H. D. Lawhead, M. D., and "Medical Treatment of Thyroid Disorders," by C. A. Poage, M. D. The speakers were limited to ten minutes; the meeting was a very interesting one and discussion was quite general.

Keith of Williams and John Lawson of Woodland are to be voted on for election to membership at the next meeting of the society. Salter of Williams, Floreth of Dixon, Thompson of Winters and Rathbun of Colusa, are licensed physicians of Yolo County who are not members.

Yolo County would like to see more papers in the Journal devoted to physiotherapy and more suggestions on how to get health education over to the smaller communities.

Chiropractor Hollenbeck of Woodland has been arrested for practicing medicine without a license.

The Woodland Sanitarium is enlarging its physiotherapy department and is making various improvements, such as a high frequency coil, deep therapy lamp and a quartz mercury lamp, and is building seven new treatment rooms.

The position of County Health Officer became vacant with the death of C. E. Beebe, M. D., and H. D. Lawhead, M. D., has been appointed to the position.

The Woodland Sanitarium is now holding three health conferences a week; one for infants and preschool children, one for school children and one for mixed group patients.

Is there any ruling covering persons doing massage and electrotherapy, but not advertising themselves as physicians? How far may they go? Must they work only under a physician's prescription, or are they privileged to treat by these means those who come to them without being referred by a physician, so long as they do not claim medical skill or training?

[Note: The answers to these questions are found in the Preamble and Constitution of the California Association of Physiotherapists, published in the July number of the Journal and in an editorial in the same number on the same subject. Members of this association practice physiotherapy only under the supervision of the physicians in certain matters and carry out the physicians' written prescriptions in other matters.—Editor.]

Extension Work—The advertisement of the San Francisco Polyclinic and Post Graduate School appears on page 4 of this issue. Outlined courses of this character given by competent organizations reflect an important phase of extension work and clinical instruction of great value to the profession and to the public. It is hoped that other efforts will be made by hospitals and medical schools to give graduate instruction in a variety of fields.

BOOKS RECEIVED

Lessons on Tuberculosis and Consumption, by Charles E. Atkinson, M. D. 12 mo., Cloth, 470 pages. Price, $2.50 net. Funk & Wagnalls Company, New York, Publishers.

South America from a Surgeon's Point of View, by Franklin H. Martin, C. M. G., M. D., F. A. C. S. Fleming H. Revell Company, Publishers, 158 Fifth Avenue, New York City.

The Surgical Clinics of North America (Issued serially, one number every other month), Volume I, Number 5 (The Mayo Clinic Number), 296 pages, with 163 illustrations. Preclinic year (February, 1921, to December, 1921). Paper, $12 net; Cloth, $16 net. Philadelphia and London: W. B. Saunders Company.

About Book Reviews—"The average medical book review is a perfunctory insult to the intelligence of the journal's audience, and taken by and large is worthless, even from the viewpoint of bookselling, which undoubtedly does exercise a certain influence upon its creation.

"Relatively few people can write a good medical review of any sort, only an expert can write an accurate critical analysis and appraisement of a book treating of a special subject. It requires knowledge and experience to make a judgment of the value of a given book and the book reviewer must in addition be able to give clearcut expression to his criticism. A great many medical books scarcely deserve space in the Books Reviewed columns and should be ignored. Mischievous misleading books should be mercilessly attacked. Strong useful books should be subjected to constructive, stimulating criticism.

"One such able, honest, independent review a month will do a medical journal and its readers more good than a hundred half-baked, stock-form reviews which are equally valueless to author, reader and publisher."—(Abstracted from Editorial, N. Y. Med. Jour., January 18, 1922.)

This editorial and the one in our own Journal outline the policy that the California State Journal of Medicine hopes to follow in the future.

NEW MEMBERS

Edw. J. Ghidella, San Francisco; George V. Alderson, Chino; David C. Mock, Redlands; William L. Vickers, San Bernardino; Vernon C. Charleston, Needles; W. W. Cress, Sacramento; Smith McMullin, Folsom; Henry D. Buckman, Sacramento; Charles B. Bennett, Berkeley; Philip H. Petch, Oakland, Cal.; Dalton G. Paxman, Oakland, Cal.; Fred J. Walter, San Diego; G. W. Blatherwick, R. I. Hubert, Joseph A. Conaty, Jr., Verne R. Mason, Los Angeles; William L. Renick, Long Beach, Cal.; Henry D. Eaton, Los Angeles; Rowland P. Stanley, El Monte; C. Max Anderson, Hermosa Beach; Edward N. McKee, Los Angeles; Clifford A. Wright, Los Angeles; Poul M. Hunter, Pasadena; J. J. Gaynor, Davenport; Robert B. Hoag, Boulder Creek; W. Grant Hatch, Santa Cruz; William F. Stein, Fresno; John A. Montgomery, Fresno; Adolph Rosenthal, Ralph Rabinowitz, Albert H. Moore, Joseph Fife, George H. Becker, Harold J. Cooper, Elizabeth Schulze, Jesse W. Citron, Albert M. Jacobs, San Francisco; Zach Coblentz, Santa Maria.

Resigned—C. F. McCarthy, San Francisco.

MISCELLANEOUS

ADDITIONS TO EXTENSION LECTURES

For other lectures, see November and February numbers of the Journal.

HAROLD W. WRIGHT,
Flood Building, San Francisco.

I—The Psychoses of the Puerperal State:
Toxic-exhaustive syndromes and manic-depressive syndromes; differential diagnosis; factors influencing prognosis and course of disorder and liability to recurrence. Case reports illustrative of the above.

II—The Insanity of Adolescence: (Dementia Praecox)
Historical survey; premonitory symptoms; clinical types; differential diagnosis.

III—The Prognosis in Various Mental Diseases:
Toxic; organic; functional; traumatic; developmental. The type of original personality in relation to prognosis. The need of observation facilities in general hospitals prior to decision as to commitments as a humane and an economic measure.

The Ernest H. Baynes Lecture on "The Truth About Vivisection"—On page 73 of the February number of the Journal announcement is made of the 1922 popular medical lectures given by Stanford University at Lane Hall. All of these lectures are very much worth while to members of the medical profession and to the public. Mr. Baynes' lecture is of particular interest and of the very greatest importance to every citizen of the State, because this matter is making its usual perennial appearance before the voters of California. It is hoped that as many people as possible will attend this particular lecture, the date being Friday, March 10, 1922.

Private Lectures in Ophthalmology—A group of ophthalmologists of San Francisco are making arrangements to have Professor Fuchs of Vienna give a private course of lectures to ophthalmologists during his visit here as the guest of the California Academy of Medicine in June. Invitation is extended to members of the State Society throughout the State to avail themselves of this opportunity. Any wishing to take this course should write to Dr. Harold A. Fletcher, 804 Butler Building, San Francisco, for particulars.

Socialized Medicine—"That there are influences in this country which are bent on bringing all the people's affairs under official scrutiny, is most apparent from the efforts now being made to create a sentiment in favor of 'State medicine.' This means simply: more jobs, no privacy, curtailment of freedom, the destruction of the medical profession by the discouragement of research work, and the coarsening of delicate intimacies. It means practically that what the United States Shipping Board did to the shipping situation of the country, 'State medicine' would be permitted to do to the people's health.

"Between family physicians and families there is a confidential relation which rests on choice and experience. It is not official. It is not altogether professional. It partakes of the confessional in large degree, and constitutes a friendly pact based on the experience of many fights with disease and death. So well recognized is this that the family physician has become a fixed figure in our lives, and with results of undoubted good, as the records generally show.

"To change all this and establish a police health station, as it were, at which citizens must apply for medical aid and await the pleasure of an official doctor who is paid anyway, and whose professional career does not depend on the confidence he is able to evoke by skilled and loyal service, is to suggest something which is so alien to our Americanism as almost to prove an alien course and an alien purpose."—(Editorial from Dearborn Independent.)

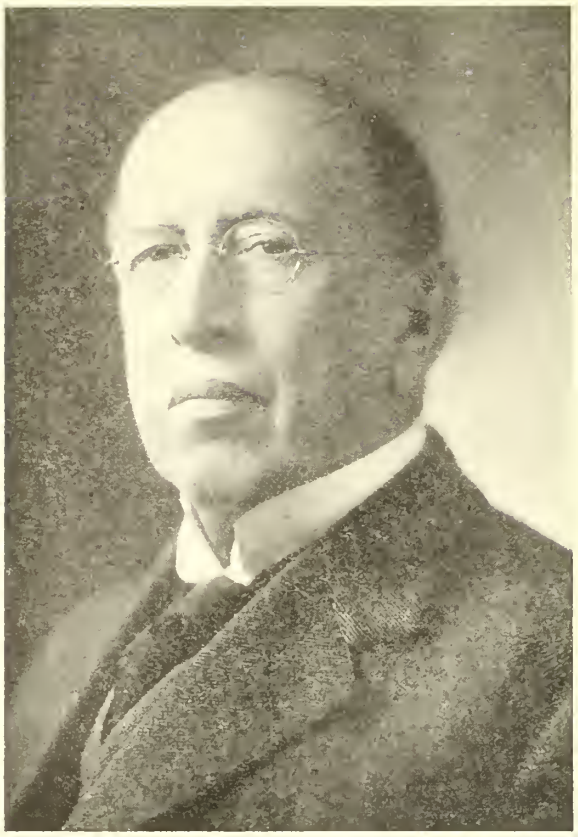
Vacancies in the Regular Corps of the U. S. Public Health Service—Examinations of candidates for entrance into the Regular Corps of the U. S. Public Health Service will be held at the following named place on the date specified: At San Francisco, Calif., March 13, 1922. Candidates must not be less than twenty-three years nor more than thirty-two, and they must have been graduated in medicine at some reputable medical college, and have had one year's hospital experience or two years in professional practice. They must pass satisfactorily oral, written, and clinical tests before a board of medical officers. Successful candidates will be recommended for appointment by the President with the advice and consent of the Senate. Requests for information or permission to take this examination should be addressed to the Surgeon General, U. S. Public Health Service, Washington, D. C.

Physical Standards for Children—According to the United States Public Health Service, "The common test of a child's health development, and about the only test that can readily be applied to children in mass, is to ascertain by some standard table of age-weights prepared for the purpose, whether or not they weigh as much as they should at their age. If the child is 10 per cent or more under standard, it is considered to be under-nourished and is treated accordingly.

"This, however, may or may not be the case, for the standard tables are largely approximations. Nevertheless, they serve a useful purpose, pending the establishment of more accurate and scientific standards, by calling attention to individual children and causing a more careful examination to determine whether the sub-standard weight is due to a remediable cause.

"Some of the age-weight standards used in the United States are merely averages of all classes of children, including with the well those who have hampering physical defects and those who are actually under-nourished. They probably never did apply to all parts of the United States, and quite possibly they no longer apply even to the particular part for which they were originally devised."

This quotation from the U. S. Public Health Service expresses mildly and conservatively a problem that is being daily amplified by the enthusiasm of statistical standardization experts. Inquiries from physicians from all over the State and from intelligent citizens show that the so-called standards are being interpreted too literally and not always by competent observers. We have the definite assurance of pediatricians of uncommon ability that some of the finest, healthiest specimens of children in the State of California are pronounced "under-standard" or "under-nourished," and parents and friends are made anxious over an ever-increasing number of perfectly healthy children.



WALTER LINDLEY, M. D.

AN APPRECIATION OF WALTER LINDLEY

By H. G. BRAINERD, M. D.

It was my good fortune to make the acquaintance of Dr. Walter Lindley in 1886. At that time he had been in Los Angeles about ten years, and had built up a large medical practice, but had taken time to infuse new life and activity into the moribund Los Angeles Medical Society, and was its efficient secretary and later president.

He had improved the sanitary condition of the city by his service as health officer, and had served on the Board of Education: had devoted much time in helping start the Los Angeles Orphans' Home, and for a number of years was physician to the Home, and president of its Board of Managers. He had, also, been superintendent of the Los Angeles County Hospital for a couple of years.

At the time I became acquainted with him he was devoting his energies to organizing the first medical college in Los Angeles, and for several years thereafter was its efficient secretary, and later secretary and Dean of the Faculty.

His work in connection with the Board of Education and Orphans' Home led him to take great interest in defective children, and it was largely through his efforts that the Whittier State School was established. When it was finished and equipped he was its superintendent for the first five years of its existence, and later continued on its Board of Trustees. After resigning the superintendency of the Whittier State School he returned to Los Angeles and one of his first activities was to organize the California Hospital, to which he devoted largely of his time and means. He was its efficient medical director until it passed last year into the hands of the California Lutheran Hospital.

Shortly after the opening of the California Hospital he established a training school for nurses, the first to be established in Southern California. About this time he became publisher of the Southern California Practitioner, and was for many years the editor and publisher.

Prior to his superintendency of the Whittier State School he had become a member of the National Association of Charities and Correction, and for several years served as its secretary and later vice-president.

With all of his many interests he always found time to devote to the political affairs and the social welfare activities of the city.

He once said to me that the height of his ambition in the matter of wealth was to be able to buy all the books he wanted, and throughout his life he was always collecting choice books until he had a very large and valuable library, which was a source of great pleasure to himself and many of his friends.

He always gave a hearty welcome to the new physicians in Southern California, and scores of young doctors have been greatly indebted to him for his encouragement and help. No friend ever went to him with his troubles without receiving sympathy.

The apoplectic stroke, which came to him while at work, proved fatal in a few hours.

He has left to his sons and daughters a wonderful heritage of an unsullied life full of good works, and to his friends a memory of a beautiful friendship.

DEATHS

Hickman, W. S. Died in Georgetown, California, January 9, 1922. Was a graduate of Medical Department Vanderbilt University, Tenn., 1886. Licensed in California, 1886. Age 65.

McCoy, John. Died in the Soldiers' Home, Sawtelle, Calif., December 21, 1921. Was a graduate of Medical Department of the University of Michigan, March 30 1865. Licensed in California, 1890.

Felton, Lucius Ely. Died in Hanford, Calif., January 8, 1922. Was 72 years of age and a graduate of Bellevue Hospital Medical College, New York, 1871. Licensed in California, 1891.

Clifford, John Bruce. Died in Santa Barbara, Calif., January 12, 1922. Was a graduate of the California Medical College, California, 1894. Licensed in 1894.

Felton, Lucius Ely. Died in Hanford, Calif., January 8, 1922. Age 72. Was a graduate from Bellevue Hospital Medical College, New York, 1871. Licensed in California, 1891.

Gilliland, A. B. Died in Cottonwood, Calif., January 26, 1922. Was a graduate of the U. S. Grant University, Tennessee, 1894, and licensed in California, 1897. Was president of the Shasta County Medical Society of the State of California.

Johnson, J. H. Died in San Gabriel, January 16, 1922. Was a graduate from University City of New York, 1887. Licensed in California, 1888. Was a member of the Medical Society, State of California.

Layman, D. W. Died in San Diego, January 15, 1922. Was a graduate of the University of Illinois, College of Physicians and Surgeons, 1904. Licensed in California, 1921. Was a member of the Medical Society, State of California.

Lindley, Walter. Died in Los Angeles, January 24, 1922. Was a graduate of Long Island College Hospital, New York, 1875. Licensed in California, 1876. Member of the Medical Society, State of California, also State Board of Health and a former member of the State Board of Medical Examiners.

Morrissey, Joseph Grant. Died in San Francisco, January 13, 1922. Was a graduate of Medical Department, University of California, 1894. Licensed here the same year. Age 57.

Owen, Henry W. Died in Bakersfield, Calif., December, 1921. Was a graduate from College of Physicians and Surgeons, Kansas City, Mo., 1901. Licensed in California, 1901. Age 53. Was a member of the Medical Society, State of California.

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Managing Editor - - - - - - - - - - CELESTINE J. SULLIVAN

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ORIGINAL ARTICLES

CORRECTION—The Editor regrets that an error was made in the March number of the Journal in giving credit for the article on "Glucose and Alkalies in Surgery" to Alanson Weeks and LeRoy Briggs, when it should have been Alanson Weeks and LeRoy Brooks.

SUPRAPUBIC VERSUS PERINEAL PROSTATECTOMY

A Comparative Study of 134 Personal Cases

By FRANK HINMAN, A. B., M. D., F. A. C. S.
Assistant Clinical Professor of Urology, University of California, San Francisco, Calif.

Unless men who have been trained by Young can demonstrate to their own and their colleagues' satisfaction that they have acquired from him the ability to properly perform perineal prostatectomy, and can themselves train others, this operation is in a fair way to disappear. Its technical difficulties have proven too great for general adoption. Attempts to perform it were almost universal following Young's earlier publications, but the failures are so evident that men have come to prefer the greater surgical risk of suprapubic prostatectomy because of its greater assurance of cure in their hands.[1] Young himself strongly advises against an attempt of his operation by the inexperienced. These ideas have now become so general that a majority of urologists have never done perineal prostatectomy, and others only a relatively few cases. These cases, furthermore, usually have been of the small fibrous type or unusually poor clinical risks. Other perineal operations, such as the median perineal, have also been occasionally tried. Results obtained, however, have often been ascribed to the perineal method. All results, both by the inexperienced in Young's method and perineal methods other than Young's, have been used for comparison by the suprapubist, but from what has just been said of the technical experience required and the fact that we believe that no other perineal operation is as efficient as Young's, such a comparison is unjust. The inability of the majority to perform the operation does not prove to the satisfaction of those who can perform it, that the operation when properly performed is inefficient or inferior to the suprapubic method.

[1] Delbet of Paris, for example, at the French Urologic Association, 1920, reported no mortality by way of the perineum and 17 per cent suprapubically, and yet unqualifiedly declared in favor of suprapubic prostatectomy because practically all of his perineal cases had had persistent fistulae or suffered recurrence of prostatism.

The obvious, though unintentional unfairness to Young's perineal method, has been fourfold:

1. Comparison of the results of men inexperienced in performing perineal prostatectomy with results of experts by way of the suprapubic route. The only just comparison is expert with expert.

2. The general tendency of the operator, who occasionally does both operations, to subject his poor surgical and urological risks to the perineal operation, and the more typical hyperplasia of the younger good clinical cases to the suprapubic operation, because of the recognized more benign nature of the former. The very cases that are most likely to have a poor functional result by any method have in this way been subjected to the perineal operation.

3. It is well to recognize that advanced or complicated prostatism, a type most difficult of cure, is commonly accompanied by the operative risk of a poor clinical condition, such as cardiac or renal insufficiency. A suprapubist kills off these potential functional failures, but the majority survive perineal operation, and in consequence lower the percentage of complete cures. It is only fair, therefore, that operative deaths have due consideration in the comparison of the functional results of cure, improvement or failure by the two methods.

4. Attention should be drawn to the discrepancy in statistics that is apt to arise since the more general adoption of a two-stage procedure in suprapubic prostatectomy. Those cases which do not survive the first stage are not considered as fatalities of suprapubic prostatectomy, but in our limited experience and as generally stated as that of others with a wide experience, those that do survive have weathered 80 per cent of the difficulties. Obviously such a preliminary test of vitality will eliminate both the poor clinical and urological risks from future consideration in the analysis of results of suprapubic prostatectomy. In order to complete the statistics of any series, we believe that the failures in operation, whether by catheter or cystotomy, should be accurately listed.

A more careful study of suprapubic results shows that even this operation is not so universally successful in effecting cures as many would have us believe. The general results, our own personal results in fact, are most discouraging, and it is only in the hands of experts, just as in the case of the perineal operation, that anything like satisfactory results are obtained. Whiteside found only about 30 per cent cures with mortality of over 20 per cent in general hands, and these findings have been more recently confirmed by Thomas. Two in every ten cases did not survive the opera-

tion, and three of the eight who did were not cured. Because the operation is technically easier than the perineal does not prove its simplicity nor justify its universal practice. Its successful execution requires training, and without that training the results will be poor.

Our own poor results in thirty-eight cases suprapubically are briefly given below in comparison to those obtained in ninety cases perineally.[2] In addition, six suprapubic failures of other surgeons, four of whom we know to be expert specialists, have come under our care during the last five years, whereas in the same time we have seen only two perineal failures of others. Five of these first had suprapubic fistulae persisting since operation for four, three, two and one years, and four months, respectively. Urologic and cystoscopic study showed marked structural defects in all six and all were complete functional failures. Cancer or vesical diverticula were definitely absent in all and, therefore, not factors. None of our own suprapubic cases were operated until after considerable experience in bladder surgery and after careful study and observation of the technic of many operators. The results, therefore, cannot be blamed wholly to poor surgery. The six total failures of others, much worse than any of our own, who are frank suprapubic exponents, appeases our conscience in this respect.

Mortality statistics following prostatectomy are fairly complete. The perineal has been universally found to be the more benign procedure. Personally we have now eighty-one consecutive unselected cases successfully operated without death, our total mortality by perineal prostatectomy being 2.2 per cent.[3] Our experience suprapubically has been most unfortunate—six deaths and one suicide in thirty-eight cases, or a mortality of 15 per cent, and we cannot help but believe, in view of most of these cases being good surgical risks, that the majority would have survived, and now be living and well, had they been operated by way of the perineum.

The suprapubic cases have a distinct advantage with respect to the surgical and urological risk. They were selected on the basis of typical intravesical enlargements in good clinical condition. Of the suprapubic cases 84 per cent were in good clinical condition as compared to only 34 per cent of the perineal cases. The average age was sixty-four as compared to that of sixty-eight for the perineal. Prostatism was neither so advanced nor complicated so that surgery being successfully performed, there was good prospect of cure in 80 per cent, fair prospect in 15 per cent, and a poor chance in only 5 per cent, as compared to the urologic risk for the perineal cases of good, 60 per cent; fair, 16 per cent, and poor, 24 per cent.

An effort has been made to determine by cystoscopic and urologic study, occasionally by cystography, the late structural result of operation. Forty-eight perineal cases on an average of two years after operation, and eight suprapubic cases on an average of two years, have been so studied, with the finding of 68 per cent good structural recovery perineally, but only 38 per cent suprapubically. Thirty-two per cent of the perineal cases had fair repair of the prostatic urethra and sphincter, while one-half of the suprapubic cases were so classed. There was one failure among our earlier perineal cases, of structural restoration, a case of incomplete enucleation, whereas 12 per cent of the suprapubic cases were structural failures.

Good structural restoration is the most important factor in either perineal or suprapubic prostatectomy in securing a good functional result. The defects in structure may be the result of changes produced by the enlargement or by the surgeon, but sometimes by both. The defect common to suprapubic enucleation is the persistence of a larger or smaller prostatic cavity communicating with the bladder either by a wide funnel-shaped neck or a narrow contracted orifice. The latter are the type difficult of instrumentation or catherization. Plication of the prostatic mucosa after the removal of large glands is the common defect following perineal prostatectomy. Tags of mucosa or hyperplastic nodules or even lobes left at the vesical neck or some portion of the prostatic cavity, are common to both methods, but are more apt to occur after perineal prostatectomy because of the common practice of removing the hyperplasia in one intact mass suprapubically and not by separate lobes or portions as is usually done perineally. It is this particular difficulty in the performance of a successful perineal operation that has appealed to the writer as the principal cause of the general disfavor of the operation, rather than the difficulty of anatomical approach, for it is this difficulty of complete, clean enucleation that leads to poor functional results or later to a recurrence of prostatism, on account of all the gland not having been completely removed. En masse enucleation with divulsion of the prostatic urethra simplifies this step of the operation and secures complete removal. We have described a procedure, with this object in view, that has now been used with slight modifications in our last twenty-five cases with 100 per cent functional cures. Just as good preservation of sphincters, veru montanum and ejaculatory ducts is possible as by Young's technic, and it has the added advantage of a more certain complete removal of all the hyperplasia, secures a better structural result, quicker surgical healing, and does not require so much technical skill to obtain what has been emphasized as the important step of any operation, a complete, clean removal.

The functional results of all cases have been determined by the careful questionnaire,* answers

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2. Reported in detail before the Montreal meeting of the American Urological Association, June 3, 1921.

3. We have had two deaths in ninety cases (June, 1915-April 30, 1921) operated since leaving Johns Hopkins, but we had two in the twelve cases operated by us while resident under Dr. Young at the Johns Hopkins Hospital, and in all justice to our statistics, these are excluded (4 deaths in 102 cases).

to which have been received from sixty-five perineal and twenty suprapubic cases. Perineally, there are 83 per cent cures, 7 per cent improvements and 10 per cent unimprovements, or poor functional results, as compared to 38 per cent cures, 19 per cent improvements and 43 per cent poor results suprapubically. The patients were asked to answer the direct question, "Do you consider yourself cured?" Eighty-nine per cent of the perineal cases said "Yes" unqualifiedly, while only 70 per cent of the suprapubic cases were so well satisfied as to admit a cure. The morbidity among the sixty-seven perineal cases is 16 per cent (eight deaths "since operation," two "at operation") as compared to a morbidity of 33 per cent suprapubically (three deaths since operation, six operative deaths). The deaths since operation of the perineal group would naturally be higher (15 per cent) than the suprapubic (10 per cent), because of the preponderance of poor clinical risks and generally more advanced age of this group.

SUMMARY

This analysis clearly demonstrates that in our hands Young's perineal prostatectomy excels the suprapubic operation in every respect. It has given a lower mortality, 2.2 per cent, as against 15 per cent; and a higher percentage of cures, 83 per cent as against 38 per cent, even in spite of the handicap of less promising material. We now have eighty-one consecutive unselected cases successfully operated by way of the perineum without death. Recto-urethral fistulæ, persistent perineal fistulæ and incontinence have been absent in all our later cases and at no time troublesome, and, though five years is the longest time since operation, we have yet to have one case return with a recurrence of prostatism.

The generally poor results that have been reported for Young's perineal prostatectomy are, in our opinion, directly blamable to the inexperience of the operator rather than the fault of the operation. With other types of perineal operations we have had no experience. Properly performed, Young's is an ideal surgical procedure, but presents two types of technical difficulty—the anatomical approach and the actual glandular enucleation. Errors in the first lead to injuries of the rectum or external sphincter; in the second, to structural defects, with either persistence of prostatism or its recurrence.

Prevention of surgical errors in the anatomical approach comes by experience and a knowledge of the anatomy of the perineum; prevention of the structural defects is best secured by a complete, clean removal of the hyperplasia. This is simpler and more certain by the modified method of enucleation whereby the hyperplastic mass can be accurately dissected out intact under direct control of the eye. In the twenty-five cases in which this perineal en masse enucleation has been used, the immediate and later results have been most gratifying, 100 per cent functional cures.

* Questionnaire

I. **Urination:**

1. What is your frequency of urination?
   (1) Give the average number of voidings during the day ———
   (2) Do you get up at night to void?
      (a) Give the average number of times ———
      (b) Give the approximate time of night that these voidings occur ———
2. Do you have burning on urination?
3. Do you have hesitancy of urination?
4. Do you have difficulty of urination?
5. Do you have dribbling of urine?
   (1) Is this at end of urination?
   (2) Is this between urination? ———
   (3) Have you good control of urination?
6. What is the character of your urine (1) Clear ——— (2) Cloudy ———
7. Have you had a swollen testicle (Epididymitis)? If so was it
   (1) Before operation?—Right ——— or left ———
   (2) After operation and while in hospital?—Right ——— or left ———
   (3) Since leaving hospital?—Right ——— or left ———

II. **Sexual Ability:**

Regarding your sexual life since operation:

1. Have you sexual desire? ———
2. Do you have erections? ———
   (1) Are they satisfactory? ———
   (2) Or unsatisfactory? ———
3. Have you had sexual intercourse? ———
   (1) If not, has it been attempted? ———
   (2) Or not attempted ———
   (3) If so, give average frequency and character ———
4. Is ejaculation complete? ———
5. Do you have seminal discharge? ———

III. **General Condition:**

1. Do you consider yourself cured of your prostatic trouble? ———
   (1) If you do not, please describe the character of your present disability ———
2. How does your general health, since operation, compare with what it was just previous to operation? ———

(516 Sutter Street)

Throwing Away Our Birthright—"The immigration problem can never be settled wisely and justly unless it be settled by those who have a vision of what the United States stands for. The United States will cease to be the land of opportunity unless we preserve unsullied and undiminished the ideals by which, and on which, this republic was created. The foreigner who hopes by plotting to win advantage for his creed over here, though he were twenty times naturalized, would remain a foreigner. He who seeks to involve the American States in the political or religious quarrels of the country from which he came is no American; he is a traitor of the baser sort. That citizen who would use his country for his private gain deserves to be uncitizenized. No true American will consent to the admission to our country of foreigners who will lower its standard in health, in morals, in intelligence, or in patriotism. Until we realize that we have inherited a sacred trust and that we must preserve it sacredly, we, too, are but imperfect Americans." (William Roscoe Thayer, in the North American Review of February.)

There is more in this article that is worth the time of any physician to read. The basic principles of right and wrong in adequate immigration laws and in effective law enforcement are medical.

THE DIFFERENTIAL DIAGNOSIS OF ECZEMATOID DISEASES

By SAMUEL AYRES, JR., M. D., Los Angeles
From the Department of Dermatology, White Memorial Hospital, Los Angeles

Anyone who comes into daily contact with patients suffering from skin diseases must be aware of the confusion which exists in the minds of most physicians and practically all of the laity in regard to that elusive dermatological scrap-heap called eczema. From the standpoint of treatment, some so-called cases of eczema differ from each other as widely as diphtheria and syphilitic sore throat. The purpose of this paper is not to offer a treatise, dealing minutely with all the possible diseases which are capable of being confused with eczema, but to indicate in a general way that there are a number of very definite and well-recognized diseases which may simulate eczema, but which must be treated according to their individual requirements. Since the etiology of many of these conditions is unknown their classification is naturally a matter of controversy and will remain subject to revision.

Darier,[1] one of the leading French dermatologists, emphasizes the fact that the eruption known as eczema is not limited to a single and specific cutaneous disease, but is a relatively common mode of inflammatory reaction of the skin toward a variety of irritants, either of external or internal origin. It is analogous to the symptom of abdominal pain, which is a mode of reaction to such widely differing causes as lead poisoning, gall stones, tabes and appendicitis.

The Eczematous Reaction.—The lesion which, above all others, is characteristic of the eczematous reaction is the vesicle, but it must be clearly understood that the vesicle is only one of a number of eruptive elements which may follow each other in a definite sequence, may co-exist, or any one of which may dominate the picture. The usual order in the appearance of the lesions is as follows: Erythema, sometimes gross edema, vesiculation, exudation, crusting, lichenification or thickening, and desquamation of crusts or scales. Papules sometimes occur, but they are frequently surmounted by vesicles or oozing pores. Pustules may result from secondary infection. Vesiculation may be so intense and confluent as to produce raw, oozing surfaces. The eruption typically passes through these stages, but it may become arrested in any one of them and continue indefinitely. In such cases, however, a few lesions typical of other stages usually occur from time to time. The onset may be acute or gradual, but the condition tends toward chronicity, frequently with acute exacerbations. The process is an inflammatory reaction, involving both epidermis and corium. The lesions are arranged in spots or patches, usually with ill-defined outlines, and are attended by a considerable amount of itching or burning. The fact that the eczematous reaction may pass through so many phases accounts in large measure for the confusion that exists.

Histologically, as well as clinically, the principal lesion of the eczematous reaction is the exudation of fluid. This begins in the corium with hyperemia, edema, and perivascular infiltration, especially in the papillary body. The plasma, which is more in the nature of an inflammatory exudate than a mechanical transudate, tends to collect in the prickle cell layer, where it infiltrates between the cells, pushing them aside and forming spaces or vesicles between them. These vesicles usually form in the deeper layers and rising to the surface with the upward growth of the cells, enlarge by further accretions of plasma and by confluence with neighboring vesicles. The vesicles may dry without rupture if the inflammation is mild, or as more commonly happens, they break through the surface of the skin, giving rise to the clinical picture of "weeping." If the edema is severe, these ruptured vesicles may remain open as oozing pores for the outlet of the plasma, which is constantly forming below. Under these circumstances secondary infection often results. Two other important histological changes are: defective cornification of parakeratosis, and in long-standing cases, an increased thickness of the prickle layer or acanthosis, which is due both to the edema and to increased cell growth.

Eczema.—There is no adequate reason, clinically, histologically, or therapeutically, for differentiating between "true eczema" and dermatitis venenata or external eczema. The etiology should be ascertained, if possible, in every case, and the treatment naturally will be modified to a certain extent, depending upon the cause. Sometimes the localization of an eruption will suggest an external origin as for example, the eruption on the hands, arms, face, and exposed part of the neck from poison ivy. The poisonous plants usually produce a more severe and acute type of eruption with greater edema than the eczemas of internal origin; the vesicles develop rapidly, cover extensive areas on exposed parts, later also on covered parts by auto-inoculation, and are closely crowded. They sometimes occur in linear arrangement due to the contact of a leaf or branch. Practically, any substance may irritate an especially sensitive skin, or even a resistant skin if applied often enough and long enough. Many cases of eczema are caused by overzealousness in the use of soap and water. A persistent dermatitis on a limited area, due to frequently repeated contact with an irritant such as chocolate in candy dippers, may in time, through a process as yet unknown, possibly allied to anaphylaxis, cause a lowered resistance or hypersensitiveness of the whole body surface so that the entire skin may become involved.

Some of the internal causes of eczema are: food anaphylaxis, other obscure gastro-intestinal derangements, chronic nephritis, diabetes, varicose veins, etc. An adequate search for the causative agent, therefore, frequently requires not only a careful and searching history, but a complete physical examination, urine tests, renal function determinations, anaphylactic skin tests, etc. All of these measures sometimes fail and symptomatic treatment is all that can be offered.

Eczematoid Diseases.—Epidermophytosis is prob-

ably the most recent disease to be rescued from the eczema junk-pile.[2] It is caused by a fungus, the epidermophyton inguinale, which under the microscope is seen to be made up of spores and mycelia; culturally, it differs from the related tineas, which cause ringworm and other parasitic diseases.[3] The recognition of this disease represents a synthesis of conditions which formerly were supposed to be unrelated. It is not always an easy matter to demonstrate the organism under the microscope. For this purpose scrapings should be taken from the deeper layers of the lesions; they should be immersed in 40 per cent potassium hydroxide on a glass slide and heated until bubbles form beneath the cover-glass.

The lesions develop and spread rather slowly; a single small patch on the hand or foot may remain localized for months and sometimes a year or more. In the genital regions, the development is more rapid. The points of election are areas where perspiration is most abundant such as the genito-crural regions, the axillæ, the interdigital spaces of the fingers and toes, the palms, the soles and sides of the feet, and sometimes the flexures of the knees and elbows. Individuals who have excessive sweating of the hands and feet are especially susceptible to the development of epidermophytosis in these locations. Between the fingers and toes the lesions consist chiefly of maceration, scaling, or a white, sodden appearance. On the palms and soles there is thickening, scaling, redness, and scattered deep-seated vesicles and vesicopustules. Here the disease very closely resembles pompholyx or dyshidrosis, but the clinical differentiation lies in the fact that pompholyx is less inflammatory, shows very little scaling and more vesiculation, and occurs in definite attacks lasting from four to six weeks, completely disappearing between attacks. Epidermophytosis frequently becomes less active during cold weather, but it may persist for months or years in some degree of activity if untreated. The lesions of epidermophytosis, pompholyx and eczema of the palms are all very itchy. In eczema there is more oozing and fissuring, and the lesions also occur on the backs of the hands, wrists, and sometimes the arms; the fungus cannot be demonstrated. Syphilis and psoriasis of the palms and soles are both dry, have no vesicles, itch little or none, and have more sharply defined margins. There are usually other evidences of these diseases elsewhere on the body. In the genito-crural regions the lesions form large red patches with little or no elevations except possibly to a slight extent along the borders. The margins are sharp, slightly scaly, and run in fairly straight lines or in a festooned design. There are frequently a number of small outlying lesions. The eruption may be bilaterally symmetrical, but is often asymmetrical. The centers of the lesions are either dry or more usually glazed in appearance, but almost never frankly oozing.

Two other diseases involving the axillary and genito-crural regions must be differentiated from epidermophytosis. Erythrasma is caused by a much smaller fungus, the microsporon minutissimum, the lesions develop more slowly, they are more superficial, scaly, and are of a pink or buff color rather than red as in epidermophytosis. The treatment, consisting of strong anti-parasitic ointments, is the same for both conditions, and is in striking contrast to the treatment of eczema. Intertrigo is a dermatitis due to local, external causes, and may occur in two stages of development—intertrigo erythema and intertrigo eczema. Some of the causes are: insufficient bathing, excessive sweating, friction, as after a long march, fermentative diarrhea in infants, leukorrhea or diabetic urine in women. Secondary infection is common. This disorder always involves contiguous surfaces, is symmetrical, and has more diffuse borders.

Ringworm of the body is a diagnosis too frequently made. The lesions are usually few in number, are circular, tend to clear in the center and to spread peripherally with a sharp border made up of minute vesicles and crusts. It is important to remember, however, that a circular lesion with a sharp border does not always spell ringworm. Chronic recurring, localized eczemas, seborrheal eczemas or eczematides, the early lesions of mycosis fungoides, infectious eczematoid dermatitis, and other conditions, may all have very sharp borders. A microscopic examination of scrapings taken from the border of a lesion will usually reveal the spores and mycelia, if due to ringworm.

Scabies ordinarily is easily recognized, but if through lack of cleanliness and excessive scratching the lesions become eczematized and secondarily infected, or if the skin becomes irritated from overtreatment, the diagnosis may not be so clear. An oozing, crusted eczema of the breasts in women should arouse a suspicion of scabies, for the female breast is one of the areas of predilection for the parasite. In such questionable cases, a careful search for burrows should be made between the fingers and toes and about the wrists. With care, the acarus scabei can be picked out of one end of a burrow on a needle-point, and can be demonstracted under the microscope.

Pediculosis, whether of the head, body, or pubic region, in the absence of cleanliness may give rise to secondary eczematization from scratching and bacterial infection. Extensive pediculosis of the scalp is often responsible for an eczematous eruption of the face, neck, and upper part of the chest. Finding the eggs or "nits" in the hair of the scalp or pubic region, or in the seams of the clothing, is strong confirmatory evidence.

Among the local bacterial infections which resemble eczema, probably the most recent to be recognized as a distinct entity is infectious eczematoid dermatitis, first described by Engman of St. Louis, in 1902. The infection may have its starting point in a furuncle, an impetigo, an infected wound, a chronic discharging ear, or any overtreated skin condition. A frequent history is that a boil or an infected wound was bandaged, and the bandage not removed for several days. The resistance of the tissues thus bathed in pus becomes weakened, and the characteristic dermatitis is the result. Most cases are auto-inoculable. Sutton,[4] of Kansas City, has found the staphy-

lococcus aureus in pure culture in most of his cases, although the albus occurs occasionally. The eruption is asymmetrical, usually on exposed areas, and is in the form of circumscribed patches with redness, oozing pores, vesicles, pustules, vesico-pustules, and crusts. The lesions spread peripherally, and the epidermis at the border is split or undermined; there is little or no tendency for the center to heal spontaneously. The disease may respond readily to appropriate antiseptic treatment, but it may persist for weeks or months. There is practically never any pain or itching.

Dermatitis repens is another chronic infectious disease, also frequently caused by the staphyloccus aureus. It is relatively uncommon, bears a faint resemblance to eczema, and is usually rebellious or recurrent. Clinically, only a few lesions are present, the areas of involvement most often being the hands and feet, but no regions are exempt, and lesions may be present on the neck, arms, axillæ, genito-crural area, etc. The lesion begins frequently at the site of a trivial injury. There is a red spot at first, which, in the course of a day or more, acquires a central flaccid vesicle or vesico-pustule, which on rupture shows a small amount of clear or milky fluid. The lesion enlarges peripherally, showing a ragged, undermined border, from under which the same clear or milky fluid exudes. The center becomes raw or glazed or sometimes crusted, and usually heals spontaneously while the borders are still advancing. An individual lesion may remain stationary for weeks, months, or years, or it may slowly spread, or it may entirely disappear and later recur. Subjective sensations are slight or absent. The disease was first described by Crocker, in 1888.

Impetigo usually offers no difficulty in the way of diagnosis, unless through lack of care or cleanliness or by overtreatment the course is prolonged. Under these circumstances it may take on an eczematous aspect; in fact, it may become converted into an infectious eczematoid dermatitis.

Among the diseases of unknown etiology resembling eczema, the commonest and most frequently mistaken is seborrhoic dermatitis or seborrhoic eczema, or according to Darier, eczematide, a condition which is presented in admirable detail and clarity in his recent text-book on dermatology which has been translated into English by Pollitzer.[5] Although eczematides and eczema show clinically imperceptible transitions, and histological lesions which are nearly identical, Darier cites the following four reasons for placing eczematides in a separate class: 1. Their usual dryness; 2. The sharpness of their rounded or polycyclic outlines; 3. Their very prolonged persistence under the same aspect; 4. Their very ready curability under the influence of appropriate local treatment. Although vesiculation frequently occurs in eczematides, the fluid is small in amount as compared with eczema, and the vesicles usually dry and become crusted without rupturing. Without attempting to describe all the clinical varieties of this disorder, it might be profitable to mention some of the characteristics of the commonest type, the figured or seborrheal eczematides. The areas of predilection are the sternum, between the scapulæ, the scalp, behind the ears, and the forehead just below the hair-line. The lesions itch moderately or only very slightly, sometimes in the scalp very severely. They occur in spots or patches with rounded, polycyclic, sharply defined margins which may be slightly elevated. The centers may heal as the borders spread. The lesions are usually covered with greasy or fatty scales.

Pityriasis alba or simplex is a benign but very persistent disease of childhood, mildly contagious, and of unknown cause. It is usually diagnosed as "dry eczema," but may be related to the eczematides. The lesions are most common on the face, especially about the mouth and chin or on the cheeks. They are superficial, dry, scaly, flesh-colored or white. The outlines may be very indistinct, but are sometimes sharply defined and polycyclic. The lesions may become eczematized. There is usually no itching.

Lupus erythematosus is a dry, scaly eruption which usually does not occur till after the second decade of life. Characteristically, it involves the bridge of the nose, extending to the flush areas of the cheeks in the form of a butterfly. It may occur elsewhere on the body. It is chronic, but may develop rapidly. The lesions are superficial, and centrally show a certain amount of surface atrophy. The borders may advance slowly or may become stationary. The mouths of the sebaceous glands, especially about the edges, are dilated and filled with horny plugs. There may be slight itching or burning during active periods. Evidence for the tuberculous origin of lupus erythematosus is entirely inadequate and contradictory. When the eruption does not appear in its characteristic location on the face, it is very often called dry eczema, but the features described above should serve to differentiate it.

There is small excuse for failure to recognize the dermatitis occurring in pellagra since the clinical picture of the disease has been so carefully worked out. The diarrhea, the sore tongue, the loss of weight, the mental and neurological disturbances are all corroborative evidence. The dermatitis itself, however, is sufficiently characteristic: the greatest involvement on exposed areas, the sharpness of the borders, the almost perfect bilateral symmetry, the dry roughness, the color—at first red, later brown, sometimes with a chocolate or purplish hue.

Lichen planus is always a dry eruption except in an extremely rare variety. The itching is sometimes intolerable. The areas of predilection are the flexor surfaces of the wrists and forearms, the shins, the external genitals, and the buccal mucosa, but no region is exempt. The lesions are flat-topped, angular, shiny, violaceous, sometimes umbilicated papules which, on an average, are about the size of a pin-head, and are arranged in patches, plaques, or streaks. Discrete lesions are usually found beyond the borders of the plaques. In the mouth the patches are white and have a cross-hatched appearance.

The erythrodermas constitute a heterogenous and ill-defined group of diseases, characterized by

redness in patches or large areas, usually of universal distribution, intense itching, dryness, and scaling. Some arise spontaneously, others are secondary to previously existing dermatoses, such as eczema, psoriasis, acute lichen planus, eczematide, etc. The skin is usually dry, but in severe cases there may be maceration and oozing in the articular folds or where fissures develop. All of the diseases in this group are extremely rebellious to treatment, and many of them end fatally. Although the etiology is unknown, febrile reaction, mortality, and such severe involvement points to the probability of a profound toxic disturbance somewhere. Leukemia sometimes manifests itself in the skin as erythroderma.

Mycosis fungoides, which is apparently a cutaneous lymphoma, may in its early stages masquerade for many months as eczema or as erythroderma. The resemblance to eczema is often striking, there being intense itching, oozing, and redness. The patches are too sharply outlined, however, and often are arranged in discs, ovals, crescents, or other designs, which should arouse one's suspicions that he is dealing with something other than eczema. The lesions are very resistant to all treatment except the X-rays, but will in time disappear spontaneously, to be followed, however, by the characteristic fungating tumors, which in the course of months or possibly a year or two, always terminate in death. In the early stages a microscopic examination of the tissues will usually serve to confirm the diagnosis. Sometimes a blood examination will reveal a pronounced leukemia; one case showing this combination came under my personal observation.

Dermatitis herpetiformis is almost never correctly diagnosed except by physicians who have a wide experience in skin diseases. It was first described and named by Duhring about thirty-five years ago. The disease may be toxic in origin, but the almost perfect bilateral symmetry of the eruption in most cases suggests an involvement of the nervous system as part of the process. The eruption is multiform: on different parts of the same patient may be seen erythematous patches, vesicles, bullæ, papules, pustules, crusts, scars, and pigmentation. The characteristic lesions are groups of vesicles on erythematous bases, which go through the whole range of evolution, sometimes with secondary alterations, ending in pigmented scars. The lesions itch severely and are sometimes painful. The natural history of the disease is a succession of persistent, rebellious attacks, lasting weeks or months, alternating with periods of complete or nearly complete freedom from the disease. The characteristics described above, especially the symmetry, should serve to differentiate the condition from eczema.

Erythema multiforme, pityriasis rosea, tinea versicolor, and psoriasis could hardly be confused with eczema except by the most inexperienced, unless a secondary dermatitis had been produced by improper or excessive treatment.

SUMMARY.

Many dermatoses commonly diagnosed as eczema are distinct clinical entities, which in some instances require treatment that is diametrically opposed to that of eczema.

Eczema is not a single and specific disease, but is more in the nature of a symptom or mode of reaction on the part of the skin toward a variety of causes acting both internally and externally.

Whenever eczema is written as a diagnosis, the etiology, if ascertainable, should be included.

The failure to differentiate between eczema and conditions which more or less closely resemble it, and the failure in cases of true eczema to make an adequate search for the cause, account in large measure for the reputation which eczema has acquired of being an uninteresting and incurable disease.

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I am indebted to Dr. Ralph R. Campbell, Chief of the Department of Dermatology of the White Memorial Hospital, for his kindness in reviewing this paper.

(806 Brockman Building)

ST. LOUIS MEETING OF THE AMERICAN MEDICAL ASSOCIATION

The arrangements for the National Convention of the A. M. A. are singularly convenient for delegates and members who are planning to go from California and other Pacific Coast States. The 1922 convention of the Medical Society of the State of California will open in Yosemite National Park May 15, and will close May 18 in time for those going to the A. M. A. Convention to reach St. Louis for the opening session May 22. We are informed that the grouping of the meeting places shows a decided improvement over the accommodations which were offered by St. Louis at the 1910 meeting. Allied Sections are so closely grouped together that those who attend the convention may travel from section to section in from one to five minutes.

The registration office, postoffice and commercial exhibit is to be in the Moolah Temple (Shrine), a beautiful and commodious building on Lindell Boulevard, two blocks west of Grand avenue. At the other extremity of the group is the Odean, with a main hall which seats more than two thousand, and several lesser halls. The main hall will be used for the opening session.

The St. Louis profession is preparing for an unusual attendance; hotel reservations are reported as coming in rapidly, but it is purposed that even the late-comer shall be comfortably housed. Dr. M. B. Clopton, 3525 Pine street, St. Louis, is chairman of the Committee on Sections and Section Work.

ORAL FOCI OF INFECTION, THEIR DIAGNOSIS, DIFFERENTIATION AND SYSTEMIC MANIFESTATIONS.*

By ROBERT BURNS, JR., D. D. S., San Francisco

Diseased teeth and their surrounding tissues are often factors in ill health. Physicians frequently fail to utilize this fact in diagnosis and treatment. A cursory inspection of the mouth and a radiogram do not furnish sufficient data to warrant conclusions. The judgment of the dentist is often inadequate because by education and habit he is primarily concerned with saving teeth and his training in pathology is restricted to a very narrow field. Dentists are inclined to look upon a tooth as something apart from the rest of the human economy to such an extent that to many an abscess is a "gum boil" to be shut off from all drainage by sealing in with a patent medicine.

The diagnosis of foci of infection in the oral cavity is not always a simple matter. Both physicians and dentists need to study more in detail the anatomy and pathology of the oral tissues. If the dental profession is too mechanical in its bent, scornful of the fact that infection at the apex of a tooth is more dangerous than the more drainage free infection in a tonsil, no small portion of the blame rests with the medical profession. For back in 1840 when the dentist, Chapin Harris, sought to interest the medical men of Baltimore in the establishment of a course in dentistry in the medical school he was repulsed. So he established the Baltimore College of Dentistry, the first dental college in the world, a movement that has resulted in an immeasurable amount of good, but after all a colossal mistake, for it set up as separate and as things apart two professions that should have beeen as one.

In the consideration of oral pathology, particularly with reference to systemic sequelae, I desire to lay especial stress upon the fact that a tooth is no more nor less than bone,—highly specialized bone,—hence possibly a little more prone to disease, and that with its investing tissues as it rests in its alveolus, we have represented a joint,—no more no less. An appreciation of this fact may help make clear why one of the most common results of peri-dental infection is an impairment of some other joint in the body (arthritis).

Let us consider the principal structures of the teeth.

Pericementum is the analogue and the homologue of the periosteum of bone. The only modification is that the periosteum of bone lies between a hard and a soft tissue while the pericementum of a tooth lies between two hard tissues.

Cementum in its function is unique in the body. Broadly speaking its only purpose is to act as an enveloping pad for the root of the tooth to reduce the impact of mastication and to afford attachment for the fibers which maintain the tooth in the socket.

Cementum is exceedingly thin, varying from 1 to 250 microns—say 1/100 of an inch. It is entirely structureless, devoid of any histological pattern, devoid of cells, blood vessels, nervous system or lacunae. Its viability is maintained solely by the pericementum, a point of very great significance in considering the prognosis of peridental infections. Cementum is laid down in practically the same manner as the intra-membraneous ossification of bone: that is, upon osteogenetic fibres of connective tissue are deposited masses of small globules, the product of numerous round cells functioning as osteoblasts.

Dentin forms the greatly preponderant bulk of the tooth. It closely resembles bone. It is of mesodermic origin and its cells are similar histologically and in physiological function to cementum. It is not hyaline in character as is cementum, which, in this respect, resembles cartilage.

It contains about 28 per cent of organic matter and throughout is penetrated by a mass of tubuli with an enormous number of branches anastomozing freely. These tubuli are from 1 to 3 microns in diameter. They have their origin at the pulp and terminate at the Granular Layer of Tomes. Through them pass the Fibres of Tomes which are protosplasmic projections of the odondoblastic or genetic cells of the pulp—erroneously spoken of as the "Nerve" of the tooth. Of the pulp Noyes [1] says: "The vital function of the pulp is the formation of dentin and is performed by the layer of odontoblastic cells. These cells also, by means of their dentinal fibrils, maintain the same relation to the dentin matrix that the bone and the cement corpuscles bear to the matrix of bone and cementum. *When the pulp is removed* from a tooth its dentin becomes *dead* dentin in the same sense that bone in which the corpuscles have been killed is necrosed bone." (Italics mine.)

The sole blood supply of the bulk of the tooth proper, the dentin, is received by minute arteries passing into the root canal through the apex through which passes also its innervation. The blood is returned by a complete venous system and Schweitzer [2] has demonstrated the presence of lymphatics as well. Thus when a dentist "kills the nerve" of a tooth undoubtedly we have a dead tooth, though some men euphemistically insist that it is just merely a "pulpless" tooth! These facts explain why 80 per cent of dead teeth are infected.

The granular Layer of Tomes marks an absolute and impenetrable line of demarcation between the dentin within and the cementum with its pericementum without as shown by Marshall.[3] So that when the "nerve is killed" we have absolutely destroyed beyond recovery all blood and all nerve supply to the dentin and the granular layer of Tomes prevents the possibility of any collateral circulation from the pericementum. Wherefor I hold that every dead tooth is a potential source of danger and in the presence of symptoms should be surgically removed.

Oral foci of infecton, just for convenience, I have divided into three groups. (1) infections, acute or chronic about the apices of teeth; (2) gingivitis, pyorrhoea and infections about un-

* Read before the St. Francis Hospital Clinic Club.

erupted and impacted teeth; (3) old lesions in the maxillae or the mandible due to failure of removal of infection when teeth have been removed. The latter class are more common following the ordinary "pulling" of teeth either with or without blind attempts at curetment of the sockets, than following what for a better term we may designate "surgical removal" of teeth. Such lesions are often found in mouths entirely edentulous as are also fragments of teeth broken in attempts at pulling.

Group one are due in the great preponderance of cases to death or removal of the pulp. Death of the pulp may be caused by caries, trauma, direct as from physical injury, indirect and less violent such as results from undue stress in mastication when a filling is left too high, or when due to the irregularity of the teeth so that a particular tooth receives more than its share of stress. Similar results may be brought about following the extraction of one or more teeth, if the others, through the lack of support by continuity of the arch, move out of place. The same holds true when teeth loosen and move in pyorrhea. In these forms, death of the pulp may occur very insiduously and be entirely unsuspected by the patient, much less by the physician and often are difficult to determine by the dentist. Often the only positive means of diagnosis is actually to drill into the tooth a sufficient distance to determine the state of the pulp. This point alone emphasizes the importance of ordering complete radiographs of all the teeth and the edentulous spaces as well, rather than merely a few suspected teeth.

Given a tooth in which the pulp has died or been removed, the mere physical factors render successful treatment extremely dubious, for we have a minute root canal of capillary dimensions at the apex and it may even be tortuous. From this canal we must remove every vestige of broken down, infected tissue. Then we must render this tube sterile. Beyond this we must sterilize the maze of tortuous interlacing tubuli throughout the dentine and maintain this sterility. It simply can't be done yet. Following this we must seal the apertures of these tubuli as they open into the canal and seal the canal against both efferent and afferent bacteria or toxins. A common procedure in dentistry employed to cleanse the canal is to introduce a mixture of sodium and potassium in minute quantities. At once a violent reaction occurs as soon as the chemicals come in contact with the moisture. Fortunately the intense heat created can not do a great deal of harm in the canal, but think what must be the result upon vital cells when, as sometimes happens, that sodium and potassium passes out into the bone. Some men use sulphuric acid followed by soda bicarb. Some seal a mixture of equal parts formalin and tri-kresol. I wonder how any of these formulae would appeal to surgeons if suggested for the removal of a T. B. infection in a hip joint or a knee joint. And do not forget that a tooth in its socket is no less a joint.

After this cleansing of the canal remains the necessity of making it bacteria proof. Some think they succeed in this by attempting to pump down just exactly to the apex some form of solid dissolved in a solvent followed generally by a gutta percha point packed in as tightly as may be. The liquid first portion is usually gutta percha in chloroform or in eucalyptus, or fiddle bow resin in chloroform. It strikes me as simply assinine to think that after the evanescent solvent has disappeared the resultant canal filling will be as dense as it was before and that it will bar passage to bacteria or to toxins. Price [4] of the National Dental Research Institute has established the co-efficient of contraction of our canal filling materials, so much so that not many dentists now seriously claim that they actually seal canals. Some fall back upon their belief that cementum will sometimes grow over the apex of a pulpless tooth. At best such cementum is purely hyperplastic and its presence is prima facie evidence of an abnormal condition the result of irritation. Furthermore if the cementum ever is denuded of its pericementum it never will repair itself nor can it oxfoliate, but will remain permanently necrotic unless removed by surgical interference. Upon which evidence I assert that when a good radiogram indicates such a denuded condition about a dead tooth that tooth is doomed unless the patient, banking upon an absence of demonstrable symptoms, is determined to bet his powers of resistance against the menace. Bearing upon this factor it may be mentioned that recently, addressing a meeting of the Association of Railway Surgeons, Martin Fischer asserted that diseases of the vascular system, so often unobserved until very definite and dangerous lesions are manifest, have their inception in minute foci of infection which have been of long standing and slow progress. Striking support of this view can be found in a preliminary report by Ophuls [5] of 500 consecutive necropsies had for the purpose of studying the relation of cardiovascular disease and of arteriosclerosis to infectious diseases. It was found that those cases wherein all history or signs of previous infection were absent, chronic arterial disease was almost lacking and made its appearance early and very frequently in the group where infection was known to have existed but was fairly well limited to chronic rheumatic (septic) conditions.

No better exemplification of such foci can be found than the slightly bleeding gums, usually the first noticed but also neglected symptom of a pyorrhoea that has been present for a number of years. Likewise granulomata at the apices of dead teeth rarely produce local symptoms.

The reason dead teeth may remain for years is that nowhere are they in physiological contact with other tissue save through the minute apical foramina and the organisms generally are of low grade, the degenerative process being slow. And yet through all the years there may be going on systemic disturbances equally slow and unobserved until unexpectedly there is observed a valvular

or a myocardial lesion or a cholecystitis or some other secondary lesion and even then the patient beyond hope of complete recovery.

The chief danger of gingivitis and of pyorrhoea lies in the insiduousness of their attack. Very often when they have reached the stage where they become apparent to the patient by reason of discomfort, the prognosis is decidedly unfavorable. More particularly is this true of pyorrhoea, for gingivitis, so long as it remains merely an inflammation of the gingiva, is entirely amenable to treatment which consists in removal of the cause—any irritation to the gum due to tartar, an ill-fitting crown, filling, or prosthesis of any sort, or irregularity of the teeth whereby food impactions occur about the gums. A gingivitis which, were it present about but one or two teeth, might be entirely negligible insofar as the possibility of systemic results were concerned, could very well be a serious matter were all of the teeth concerned because the sum total of the small ulcerating surfaces would represent a considerable area. For instance, it has been estimated that in the average mouth, if all the teeth were affected with pyorrhœa and the pockets averaged one quarter of an inch in depth, it would be equivalent to an ulcer approximating eight inches. I believe the dangers of pyorrhoea have been very much more underrated than overestimated. To begin with, practically nothing is established concerning its etiology and absolutely without exception, including those dentists who give it only the most perfunctory attention up to the men who do nothing else—the pyorrhoea specialists—all are attacking symptoms or end results, not causes. The first manifestation of pyorrhoea of which we become cognizant is an irritation of the gum, which later becomes detached from the root of the tooth. A pocket is formed, the pericementum is destroyed, the cementum becomes necrotic and all the structures infected. The dentist tries to cure this condition by scaling away the tartar, if any be present, and the dead cementum. If the pocket is not too deep, if access is such that all the necrotic cementum can be removed and if the pocket can be and will be kept clean and if the resistance of the patient is at par, in a certain percentage of cases there will be a cure—or at least a remission of the symptoms—and the best pyorrhoea specialists insist that their patients shall return regularly at intervals from one, three or six months for proper prophylaxis. In other words every pyorrhetic must be kept under exceedingly close observation.

In by far the greater number of cases there will be very scant abatement of symptoms, but constant exacerbations at varying intervals and renewed treatments, each attack accompanied by further loss of cementum, a progressive advance of the infection, until finally, if the patient lives long enough, the tooth will be lost. During all this time it is possible that there may have been no absorption sufficient to manifest any physical signs or symptoms. On the other hand there is great probability that great harm has been done and either the dentist should be qualified to recognize these manifestations or there should be very close co-operation with the physician. For it is just as certain that a focus of infection can lie in a pyorrhoea pocket as in a pus tube.

It may savor of heresy for one of my profession to say there is very strong evidence that the treatment of pyorrhoea should be under the control of the physician. No doubt I will be held temerarious at least to assert my opinion that pyorrhoea represents a failure of the medical profession. But I do so believe because Howe at Harvard maintained perfectly healthy guinea pigs on a scorbutic diet and produced lesions that could not be distinguished from pyorrhoea. When returned to their proper ration the lesions disappeared. Generally speaking, the systemic manifestations of oral infection are as varied as we would naturally expect from a low-grade chronic infection, while it must be ever borne in mind that in certain instances the characteristics are rather those of toxemia than of bacteremia. This I believe is markedly true, for example, in hypertrophic-osteo-arthritis, where cultures may be negative, and entirely a different matter from the definitely blood-borne arthritic infections. Yet in both instances the injury is due to the primary focus.

Following operations for the removal of foci of infection too often the patient, and sometimes the physician, fall into the attitude that now the teeth are out—I shall confine myself to oral foci—the patient is bound to get well without further care, without thought of possible secondary foci that may have been set up and from which it would seem the most natural thing in the world to expect an exacerbation of symptoms. Furthermore we often forget that after a long period of struggle with a low grade, persistent infection, wherein chronicity is the outstanding feature, patients develop a state approaching anaphylaxis. They become sensitized. Some effort at least should be made to desensitize them. The greatest effort should be put forth on the part of the internist to assist Nature in the rebuilding of the sufferer. Then it is, I am inclined to think, that autogenous vaccines, if used at all, might be used with the best hope for some benefit. This, of course, is a matter solely for the physician to decide.

By far one of the commonest disorders conjoint with oral infection is a disturbance of the nervous system. Our good old standby "neurasthenia," which so often saves our face, is probably as often due to oral focal infection as any other one thing. Let me quote the words of William Hunter in an address delivered at the opening of the session of the Faculty of Medicine of McGill University on October 3, 1910, published in the London Lancet January 11, 1911. He says: "I speak from experience. The worst cases of anemia, gastritis of all kinds and degree, of obscure fevers of unknown origin, of purpura, of nervous disturbances of all kinds, ranging from mental depression up to actual lesions of the cords, of

chronic rheumatic affections, of kidney disease, are those which owe their origin to or are gravely complicated by the oral sepsis produced in private patients by these gold traps of oral sepsis."

In the Journal of Dental Research for March, 1920, Lewellys F. Barker, M. D., very interestingly discusses the systemic manifestations of oral foci as drawn from the work at Johns Hopkins. He reports two cases that came under his observation where embolic infections of the lung appeared to be secondary to primary peridental infections. He further reports twenty cases of viridans endocarditis arising from septic teeth and in each instance the patient died. He says: "I desire at this time to emphasize the fact that the evidence is very strong that streptococcus viridans not infrequently enters the circulation from granulomatous areas about the teeth." Likewise he calls attention to "extra systolic arrythmia in which premature beats of one ventricle occur, a condition often associated with pyorrhoea as well as peri-apical granulomata of the teeth." The patients describe their sensation as though the heart were turning over. Referring to the practice at Johns Hopkins he adds: "We study the mouth in all cases of arterio sclerosis and arterial hypertension to see whether or not there is any source of infection there that may be of significance. We do this not only in cases of arterio sclerosis but in every patient who comes to us for a general diagnostic study. I feel sure that the condition underlying arterial hypertention may be aggravated by long-continued infection. Though chronic infection is by no means the only cause, it may, I believe, sometimes be an important contributing factor." Referring to the accepted fact that anemias may be due to acute or chronic infections, including oral sepsis, he says: "Whether oral sepsis can be the cause of a primary, or so-called pernicious anemia, I do not know; certainly a majority of patients exhibiting this form of chronic hemolytic anemia have infected teeth but this may be merely an accidental association." Thereupon he makes this significant statement: "Dead teeth and pyorrhœa are very common in pernicious anemia and the patients more rapidly secure a remission of symptoms if you clean up the gums and remove any peri-apical infection."

Now, just a very few statistics: Hartsell and Henrici, College of Medicine, University of Minnesota, failed to find bacteria in pulps of vital, normal teeth. Organisms were found 41 times in 93 vital pulps of pyorrhetic teeth. Streptococcus viridans was present in 29 of the 41. Staph. albus in 8 such.

Carl D. Lucas, May, 1920, before the Indiana State Dental Society reported 181 cultures from dead teeth and 71 from granulomata. Total 252.

Pathogenic organisms were obtained two hundred times, about 80 per cent. These scanty figures in themselves may not be very convincing. They are offered as simply typical of what various observers report, the aggregate of which are significant.

In 1917, before the Stomatological Section of the A. M. A., Arthur D. Black, A. M., M. D., D. D. S., Fellow of the American College of Surgeons, presented a tabulation from six thousand radiographic films of teeth and the adjacent bone in the mouths of six hundred adults. Fifty-five per cent gave evidence of bone involvements. We know that a great deal of infection exists that is not indicated by the X-ray, so the actual percentage of infection was undoubtedly greater than 55 per cent.

The eradication of oral foci of infection, with the exception of gingivitis and the earlier stages of pyorrhœa—or at least those which have failed to respond to proper attempts at treatment—falls entirely within the domain of surgery. And if, from my experience, I have reached one single definite conclusion it is that the usual "pulling" of these teeth is contraindicated. The operation of choice is surgical removal described by Novitzky,[6] which consists of the laying back of a proper flap over the bone so that it can be removed with a chisel sufficiently to expose the area involved or, at least, give proper access with specially devised curettes after the tooth has been lifted out, having proper regard to the prime importance of minimizing trauma and reducing to a minimum, consistent with thorough work, the period of anæsthesia. At the same time we must realize that the great value of the work lies in the opportunity of painstakingly searching out every bit of pathological tissue possible. By this means only, have we reasonable hope for attaining such an object, inasmuch as only by this method, after the tooth has been removed, is it possible to control the hemorrhage and carefully explore the bone under direct vision. All rough edges are carefully smoothed, the flap trimmed as may be necessary and sutured into place. The wound heals more rapidly than is usual when teeth are just pulled. Of course, circumstances may arise when it is not advisable to suture but to pack. The operator will be governed by his judgment.

"Pulling" teeth fails because, of course, it does not remove the infection in the bone beyond the tooth itself. Attempts at currettement down the socket are mere guesswork, even when straight-rooted teeth are pulled. When the roots are tortuous, it becomes a physical impossibility to reach clear to the bottom of the socket. Furthermore, the areas of infection in bone do not occur, according to regular pattern. They may extend at right angles to the socket, absolutely precluding access unless the superimposed bone is removed. As a matter of fact, blind curettement down a socket is rather more apt merely to stir up the infection, to shove it deeper into what may have been healthy tissue and make a bad matter worse. Pulling teeth violates one of the very fundamentals of bone surgery in that it establishes a dead

space into which three times a day is forced food detritus and broken-down blood clots.

When teeth have been affected with pyorrhœa for any length of time, the adjacent soft tissue is infected no less than the tooth itself and the bone. The mere "pulling" of such a tooth would in no degree whatsoever remove this tissue where it is no uncommon thing to find a granulomatous condition, which is very slow indeed in being thrown off by the body. And there invariably results more resorption of the underlying bone than would have occurred had all the pathological tissue been removed with the teeth—so much so that the gums and bony ridges are left in a very much worse condition for the retention of a prosthesis. Indeed, when it becomes necessary to remove all of the remaining teeth, surgical removal and a proper shaping of the bony arch and soft tissues—in short, plastic surgery, will play a very important part in the success or failure of the artificial restoration. Just exactly as the proper shaping of the bone to receive the pad of flesh under the flap of skin largely governs the success with which a wooden leg will be worn.

In conclusion, it seems hardly necessary to add that it is ridiculous to speak dogmatically. The mere presence of a dead tooth is not sufficient indication for its removal, and mere pulling may be proper under certain conditions. Complete histories of the patient are imperative, wherefor the active and sympathetic co-operation of the physician is indispensable.

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A FALSE RUMOR

This office is amazed to discover that a rumor is prevalent that members of the Indemnity Defense Fund have been assessed $30 a year since the institution of the fund in December, 1916. This is not true. The first assessment on Fund Members will be levied this year. Those who joined it at its inauguration have had the benefit of its protection for five years without assessment of any kind for that period.

Payment of $15 in cash and the execution of a note in the sum of $15 due one year after date entitles any member in good standing to join the fund.

SOME CLINICAL ASPECTS OF PNEUMONIA*

By HENRY H. LISSNER, M. D., F. A. C. P., Los Angeles

The purpose of this paper is to discuss certain clinical impressions which were gained during the influenza epidemic from observation of over one thousand cases of pneumonia.

At the beginning of the influenza epidemic the pneumonia cases were not numerous, but as the infection increased in virulence pneumonia was present in greater numbers. We found that pneumonia developed in three different ways: (1) During the course of influenza, after the second or third day; (2) at the end of the disease, four or five days after the fever began to subside; (3) after the temperature had been normal for a few days and the patient was apparently convalescent, a sudden rise of fever and chill, with marked depression, presaged the development of pneumonia.

The most striking objective symptom of the transition from simple influenza to the pneumonia complication was the change in color of the patient. The erythematous flush of the face, neck and upper part of the thorax changed to a bluish or deep purple cyanosis, which involved not only the face and upper extremities but, in some instances, the lower extremities as well. This type of cyanosis was usually due to pneumococcic infection. Streptococcic pneumonia changed this erythema to a pale yellow waxy skin with blanched lips and finger-nails, or a color resembling muddy water, and was accompanied by profound asthenia. This change in color was obvious in pneumonia patients before the change in pulse and respiratory rate were manifest, and before definite physical signs were present.

There were no accurate means at hand by which the differentiation of the different types of pneumonia could be made clinically. It was evident very early in the epidemic that the usual physical signs of pneumonia were insufficient to cope with the multiplicity of the lesions, and that not infrequently lobar and broncho-pneumonia occurred simultaneously in the same individual. We were fortunate to have with us the Pneumonia Commission, sent by the Surgeon-General's Office and headed by Dr. Eugene Opie, so that we could follow to the post-mortem room a great many of the patients seen clinically.

A striking feature of the pneumonias was that usually two and sometimes three lobes were involved without definite distribution in either lung.

This multiplicity of infected areas made the diagnosis of the type of pneumonia difficult, accounting, in part, for the errors in diagnosis noted in the report of the Pneumonia Commission that "erroneous diagnosis of lobar pneumonia was made in 36.6 per cent of 227 fatal cases with autopsy."

Furthermore, it is my belief that many of the discrepancies between clinical and post-mortem

* Read before the San Francisco County Medical Society.

diagnoses were due in a large part to rapid examinations and hasty conclusions. It is also impossible always to make an accurate clinical diagnosis, even with the most careful examination and backed by laboratory and X-ray aid. These situations demanded extra effort to find methods by which lobar pneumonia could be more certainly differentiated from bronchopneumonia. The whispered voice sound, as reported in 1919, has been of greater value in this respect than any of the previously known objective signs of pneumonia. This sign is fairly accurate in the differential diagnosis between lobar and bronchopneumonia, except in cases of confluent bronchopneumonia, when it also fails.

From my observation of numerous cases seen clinically and followed to autopsy, I was impressed by the utter hopelessness of attempting to make a pathological diagnosis upon clinical findings. One has but to read the opinion of Opie in this respect to realize the handicap with which the clinician approaches this task.

"A diagnosis of suppurative pneumonia is rarely if ever made. The difficulties of diagnosis are in part explained by the frequent association of lobar pneumonia, with purulent bronchitis, with bronchopneumonia, or with both, and by the occurrence of bronchopneumonia with confluent lobular consolidation involving a large part of a lobe or whole lobes.

"There are many defects in the present knowledge of the symptomatology of pneumonias under consideration. Many of these deficiencies might be supplied by the time-honored method of comparing the clinical course of the disease with the changes found at autopsies, supplemented by bacteriologic studies made during life and confirmed after death."

These observations should be taken as a stimulus to the development of a clinical diagnostic acumen, which will keep abreast with the bacteriologic and pathologic progress of our knowledge of these acute respiratory diseases.

There are two types of pneumonia seen by the clinician that are important; the one from the diagnostic standpoint, and the other from the immunologic.

The first is the so-called central pneumonia. The frank pneumonias, whether of the lobar or broncho-pneumonic type, never presented any serious difficulty so far as the question of pneumonia was concerned, but in the central pneumonias diagnosis was much more obscure. Given a case of influenza in which the fever would not subside in the usual number of days, with slight increase in the pulse and respiratory rate, with the development of cyanosis, a few rales but no bronchial breathing heard and no dullness elicited, in all probability a central pneumonia is present. In this type there are three valuable diagnostic aids: First, the development of cyanosis; second, the transmission of the whispered voice sound over the consolidated area; and third, the X-ray findings. Central pneumonia is met with much more frequently than was formerly supposed. Many of the cases go unrecognized, because of the usual lack of clinical evidence upon which to base a diagnosis. In private practice, as well as in army practice, I am sure each of us can recall many cases with cough, fever, rusty sputum, etc., in which the physical signs of pneumonia were not found, and still we felt confident of the existence of consolidation. These cases usually ran their course as central pneumonias, the pneumonic process never reaching the periphery of the lung, and were most frequently observed in the lower lobes. A careful ring-to-ring examination, with the use of the whispered voice, will generally locate the consolidated patch of the lung responsible for the symptoms. It will also differentiate between the presence of a walled-off effusion or empyema, where the shadow in the X-ray is not definite.

The second questionable pneumonia is the abortive type, which is rare.

The fear of superimposed infection is important, as the report of the commission shows that "other types of pneumococci than those primarily responsible for the development of pneumonia occurred not infrequently in a certain group of cases, either during the course of the disease or shortly after the recovery from the first attack of pneumonia. Contact infection with different types of pneumococci were directly due to infection from patients in neighboring beds. In a similar manner, superimposed infection with streptococcus hemolyticus occurred at some time during the course of pneumonia with decidedly fatal results."

The clinical significance of such data must at once be obvious. It is invaluable so far as the grouping of cases in hospitals is concerned, but the knowledge gained is particularly applicable to the care and protection of the pneumonia patient in civilian practice. The time has passed when the clinician should take an indifferent attitude toward the dangers of undue exposure to certain forms of acute infectious diseases which involve the respiratory passages. We need only to hark back to our experiences not only with the past pneumonia epidemic, but influenza and measles are fast making themselves felt by their dangerous sequellæ, and are commanding increased clinical respect. Post-measles and influenza myocarditis are not at all infrequently met with in private practice, and clinical findings verified by X-ray have thrown considerable light upon the effect of these diseases on the lungs. It behooves the physician to use every means at his command to prevent contact infection, either in the hospital ward or the sick-room, and the ways and means adopted by the army proved most efficacious after they were once put into force. These methods are well known and will not be repeated here.

In the private sick-room the protection of the patient does not present the same problems. More complete isolation is undoubtedly possible and should be insisted upon by the attending physician. There is no way of knowing, except by bacteriologic study, if the patient has contracted a second infection after his crisis is delayed beyond the expected period. Not enough physicians in private practice have their pneumonia cases typed, and if they have such a study made once at the time of establishing the diagnosis of pneumonia,

in the face of prolonged fever, too few make a second bacteriological study to determine whether or not a secondary contact infection has occurred.

In discussing secondary infection, Opie states:

"Pneumonia cannot be regarded as one disease, but must be looked upon as a group of different diseases, with more or less similar physical signs and symptoms, it is true, but caused by a considerable variety of bacteria, infection with any one of which not only provides no protection against infection with another, but even may render the individual more susceptible to secondary infection." . . .

The fact that secondary infection is possible must of necessity revolutionize all of our previous knowledge of pneumonia, particularly from the standpoint of immunology, and must arouse in us a sense of clinical asepsis which in every way should equal the care with which a surgeon approaches an operation.

CONCLUSIONS

To sum up briefly the clinical lessons gleaned from this epidemic, I would say:

1. Cyanosis is one of the earliest objective signs of a pneumonic complication in influenza.

2. Prevention of contact infection should be sought in every case of pneumonia, with attention to early isolation.

3. Primary infection of either upper lobe is not as infrequent as was previously supposed; right middle lobe involvement is not common.

4. The pneumonia problem of the future should be looked at from the standpoint of preventive medicine and should be made a part of the problem of public health service as much as any of the other epidemic diseases.

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UNUSUAL COMPLICATIONS IN A CASE OF MIDDLE EAR INFECTION *

By ISAAC H. JONES, M. D., Los Angeles

This case report is made because it presents many unique features, and sheds some light on the problem of surgical treatment of tympano-mastoid infection, associated with labyrinth irritation. I feel that if a similar case presents itself in the future, we would handle it in the same way, but we want to emphasize that such a combination of phenomena is rarely seen, and that the treatment and handling of this case, is not to be regarded as the way to handle an average case of tympano-mastoid infection.

Briefly, the case presented an apparently mild otitis media, violent labyrinth irritation, and a very large post-auricular abscess. The superficial abscess was drained, but the internal ear region was left strictly alone—a mastoid operation was *not* done. We thought it wise to wait, although, of course, we stood ready to open the mastoid if anything occurred to suggest its necessity. This very thing happened two months later—at which time the patient began to have disquieting symptoms, and the X-ray showed unquestioned involvement of the mastoid. Mastoid operation was then advised as being the safer procedure, although it was explained to the patient that there was a possibility of spontaneous recovery. The family preferred not to have the operation; fortunately, the patient made a satisfactory recovery. A careful examination made three days ago shows normal middle ear, normal cochlea, and a complete absence of all irritative symptoms—a fact the patient is entirely well, except for a diminution of function of the vestibular portion of the labyrinth.

The patient is a male, age 33, who has enjoyed good health; is of good mentality, and has unusual ability as an organist. He served in Royal Air Force in Canada, and had not previously suffered from dizziness, staggering, deafness or tinnitus.

In November, 1920, the patient contracted an acute nasal infection, following sea bathing. He used salt water douches, "trying to dislodge what was in the nose." This caused right earache, for which he consulted a doctor, who suggested opening the drumhead. This was not permitted, so nasal and throat treatments were substituted. Had two treaments a week—for six weeks—then followed a period of six weeks without treatment, and practically without symptoms. Then a recrudescence of ear symptoms occurred, for which he again consulted the doctor, who removed polyps from left naris.

On December 8, 1920, Dr. von Wedelstaedt noted a mild congestion of the right middle ear. The patient felt a bit dizzy while at the doctor's office, and then went to the theater. It was thirty minutes after that the attack occurred.

* Read before the Fiftieth Annual Meeting of the Medical Society of the State of California, Coronado, May, 1921.

As he was playing the organ, he began to notice that he could not turn his eyes to the left; (it was necessary for him to look to the left in order to see the moving pictures, and synchronize the themes of his music with the portion of the picture being shown). He found that he could turn his entire head to the left and watch the pictures, but that he could not turn his eyes toward the left without being made violently dizzy. He managed to play for the entire thirty minutes expected of him, and then suddenly he was seized with violent vertigo and fell to the left, pitching from the organ seat down into the organ pit, where he lay for one hour and a quarter, with six attacks of nausea and vomiting, vertigo and inability to move. He was found in this condition—entirely conscious, however.

During attack:

1. External objects all whirled from his left to his right.

2. He could not look to the left without becoming more violently seasick.

3. The falling tendency was entirely to the left.

4. In the organ pit, he found some comfort by lying on the right side, and stated, "If I rolled over on my back or on my left side, it brought on seasickness."

In analyzing this, it would seem that he had a pull of the eyes to the right, and that he was more comfortable when his eyes were kept in this position toward the right. Dr. Hiller took him home, at Dr. von Wedelstaedt's request, and put him on his right side. During the night, he tried to turn to the left side and vomited each time. He once tried to turn on his back, and immediately vomited. If he tried to walk, he fell forward. Each time he got on his feet, the room would whirl from his left to his right. He continued to vomit off and on for three days. On the fourth day, he was able to retain a little food, and he found that he could then lie on his left side without getting sick. On this fourth day, Dr. von Wedelstaedt felt it wise to do a paracentesis of right drum membrane, although no pus was forthcoming. The patient had been noting a rather mild earache, and on the fifth day he began to have "an entirely different kind of an earache," caused by a quickly appearing post-auricular swelling. At this time, Dr. von Wedelstaedt referred the patient for consultation.

Examination, December 17, nine days after the attack, revealed a curious otoscopic picture: the drum membrane showed some middle ear involvement, but the most noticeable thing was a good-sized mass, in the center of which was a pouting granulation situated distinctly external to the drum membrane, and on the posterior inferior wall of the external canal. Pneumatic suction caused the drum membrane to move, but failed to affect the contour of this mass.

Incision caused this external mass to subside within twenty-four hours; no swelling of the posterior superior wall, and the day following, the drum membrane looked almost normal. It was considered possible that the large post-auricular abscess had been produced through the external canal and not through mastoid involvement. Hearing was somewhat impaired in right ear, but bone conduction was greater than normal, and Weber lateralized to affected side (right); conversational voice well heard, and whispered sibilants at three feet; both cochleas normal. Caloric test showed marked impairment of responses from right ear. This, at first, made us think that the right vestibular function was impaired; however, the turning tests produced an unusually large and prolonged nystagmus, equally after turning to the right and to the left, and demonstrated that the internal ear was not only normal but somewhat hyperactive. We considered that the impaired responses to douching could be accounted for, in that the mass in the external canal and the moderate thickening of the drum membrane together might have prevented the cooling effect from reaching the internal ear. Incidentally, it is sometimes asked why the caloric test might not make the turning test unnecessary. This data given above shows the wisdom of performing every test whatsoever that could give any information in such a serious case. If we had relied upon the douching test alone, we would surely have drawn a wrong conclusion, and would have probably concluded that the internal ear was probably becoming purulent, even though the cochlea was normal.

Summarizing — Cochlea normal, and turning showed functionating vestibular portion. The internal ear was evidently intact, in both cochlear and vestibular portions; the middle ear showed little evidence of activity; the mastoid region showed large post-auricular swelling, but with no bulging of posterior superior wall. Because of the recent labyrinth symptoms, and the danger of disturbing the quiescent state of the labyrinth, it was decided to do an exploratory operation. Under local anæsthesia, a postauricular incision was made, evacuating a large quantity of pus. The periosteum was then incised and laid back, exposing normal bone. This is all that was done. It was decided for the present to defer mastoid operation. The patient made a good immediate recovery. Two weeks later, while at a theater, he had headache, and could not walk in a straight line.

January 16, paracentesis, after which staggering gradually lessened, although he noted that external objects appeared to jump up and down.

February 1, while playing the organ, sharp pain on top of head lasting a few seconds; suddenly there was "a click in the head, as if something had snapped"; after this the sharp pain ceased, and there was a burning sensation on top of head. The next morning, on looking to the right, everything stationary; on looking to the left, objects seemed to move up and down.

February 3, again objects jumped up and down, when looking to the left. While walking with a friend on his left side, patient was continually bumping into him; sensation of pressure in back of head (lower occipital region); unable to sleep

and tossed around in bed. Mastoid operation was suggested to patient, but was refused. About one o'clock in the morning, patient "began to feel shaky" and right arm began to shake; after two or three minutes the legs commenced to shake. There had been at no time any nausea, vomiting or sweating. Since February 1, soreness and throbbing behind the right ear; on February 4, throbbing had disappeared, but soreness remained.

Neurologic examination by Dr. Samuel D. Ingham—"Face flushed, expression anxious; eyeballs unsteady, but no definite nystagmus, even on lateral deviation, when subjective vertical movement of objects occurred. Station good and on each foot separately—eyes open and closed—no motor cranial paralysis. Tendon reflexes in arms and legs somewhat excitable."

Eye examination by Dr. E. R. Lewis showed probable nonpathologic tortuosity of the veins. Margins of discs were not obscure.

February 5—Fistula test markedly positive. Pressure upon the drum membrane, which is entirely intact, produced a sustained rotary movement of the eyes to the left; no horizontal movement whatever; and no quick component. This air pressure also produced a subjective sensation of falling to the left, and also a subjective sensation of external objects moving upward and to the left.

Galvanic Test—Anode and kathode gave normal responses from both ears—five milliamperes—suggesting intact internal ears; in fact, there was a rather better response from the affected ear than from the other.

X-ray Examination by Dr. William Bowman—"Cells of right mastoid appear to be filled with fluid or pus, and a portion of the cell walls is destroyed at the point indicated by an arrow on the plate. Another plate was made for the purpose of checking these findings, and again the mastoid region showed marked pathologic changes, with cell destruction in the mastoid region."

The patient was willing and rather anxious to have the mastoid opened, but the family persuaded him not to have any operation. For two weeks the patient had symptoms of pain and headache, and then all discomfort disappeared. He has been perfectly well ever since—three months.

Examination right now, May 9, shows normal drum-membrane, apparently normal middle ear and perfect hearing. In fact the patient could be considered to be quite unaffected by his illness except—

1. There is a striking reduction of vestibular function, evidenced by reduction of after-turning nystagmus from 34 and 34 to 17 and 13.

2. The rather unique exenteration of mastoid cavity shown by X-ray. Dr. Bowman's report: "At a former examination the mastoid cells were murky and indistinct, but while a portion of the trabeculæ had been destroyed, there were still some mastoid cells left in the lower-half of the mastoid. Now, the right mastoid region fails to reveal any evidence of any normal mastoid cells, the trabeculation having been entirely destroyed. The bone, however, is clear and shows no evidence of any necrotic area."

SUMMARY

1. We consider it quite possible that a mastoid operation, if done in the first place, might have resulted in stirring up a purulent labyrinthitis.

2. When later it became apparent that all was not well within the mastoid, it would have been safer to have opened the mastoid antrum, when we realize that the necrosis eventually not only exenterated the mastoid, but produced a fistula into the labyrinth; it is to be regarded as simply good fortune that the refusal of operation turned out as well as it did.

3. It is unwise to generalize about cases of labyrinth involvement, except to suggest that we should show hesitation in invading the region of the internal ear during an irritative attack, unless there is urgent necessity to drain an unquestionably purulent mastoiditis. Needless to say, the average case is that of definite purulent otitis, with involvement of the mastoid antrum, and in all such cases, of course, we should not only do a thorough paracentesis, but also open the mastoid antrum. This case, however, is not an average case and it impresses us that we must not generalize, but let each individual case be a law unto itself.

THE TREATMENT OF HUNNER'S ULCER OF THE BLADDER BY FULGURATION*

By HARRY A. R. KREUTZMANN, M. D., San Francisco

In 1914 Hunner reported in detail eight cases of bladder ulcer in women of a type, which previous to that time, had not been recognized. Due to the position of the ulcers and also to the fact that so little pathology is observed cystoscopically in contrast to the severe symptoms, this condition had previously been overlooked.

Nitze described a condition of the bladder-wall, which, no doubt, is the same as that presented by Hunner. However, the credit belongs definitely to Hunner for having emphasized this condition, and having brought it forcibly to the attention of the medical profession. Since his first paper this condition has been made familiar, and about seventy-six cases have been reported.

This type of ulcer has been given a number of different names. Cullen suggested "elusive ulcer of the bladder." Geraghty called it paracystitis; Keene named it circumscribed pan-mural ulcerative cystitis because all the coats of the bladder are involved. Bumpus considers submucous ulcer of the bladder appropriate, because of the great involvement of the submucousal structure. The term most commonly applied is Hunner's ulcer.

The etiology was not definitely known until Bumpus (1921) reported that he had produced

* Read before the St. Francis Hospital Clinical Group, October 28, 1921.

the typical bladder lesion in animals by the intravenous injection of pus-producing organisms, thereby strongly indicating an infectious etiology. The bladder urine is often sterile to culture, and many of the patients have no demonstrable focus of infection elsewhere in the body, nor do they have a clear history of any former infectious disease.

The pathological picture is that of a chronic inflammation involving all the coats of the bladder.

The predominating symptoms are pain and frequency of urination. The pain is of a sharp, stabbing character, usually occurring in the region of the bladder. However, it may be referred to the rectum, to the lower abdomen, to the perineum, or even to one hip. Stranguary, or burning on urination may be present.

The bladder walls are thickened and contracted, and the capacity greatly reduced. This may explain some of the symptoms. The pain occurs when the bladder becomes moderately distended and the rigid wall begins to expand under the pressure. Similarly, cystoscopy, especially with the water cystoscopes, is a most painful procedure and usually cannot be undertaken except under a general anæsthetic. Frequently the symptoms are of long duration, and many of the patients have had one or more major pelvic operations performed in an unsuccessful attempt to alleviate their suffering. In the first series of eight cases which Hunner reported, the average duration of symptoms was seventeen years. These ulcers are as common in men as in women.

The patients usually fail throughout their long illness to observe hæmaturia. Hunner states that very careful repeated microscopic examinations usually will show a few red blood cells and leucocytes. This minute bleeding occurs from breaks in the mucosa due to unusual stretching of the bladder-wall, either from overdistention or trauma.

Cystoscopic examination reveals very little, considering the intensity of the subjective symptoms. A thorough examination of the bladder reveals single or multiple ulcers, most frequently located at the vault or at the sides of the bladder and never in the region of the trigone, where Fenwick's ulcer usually is located.

When viewed with the water distention cystoscope, the ulcerated area has a glazed, dead-white appearance, from which the fine blood vessels have disappeared. Segments of blood vessels are seen coursing along the white area for a short distance, and then suddenly disappearing. Either in or near the edge of the dead area, single or multiple petechial spots, resembling the small reddish areas produced occasionally when the beak of the cystoscope traumatizes the bladder wall, may be seen. Small, wavy masses of fibrin may be attached to the edges of the ulcer.

A very characteristic phenomenon is noted, when the bladder is dilated beyond its pathological capacity. Immediately a fine stream of blood begins to flow from the ulcer and trickles down towards the base of the bladder. Very often the glazed, dead section is surrounded on all sides by an area of bullous edema.

All authors agree that the only treatment is excision of the diseased portion of the bladder. If a less dangerous procedure is available, in my estimation it should be given a fair trial before operation is attempted.

Following is the history of a patient treated successfully with fulguration alone.

CASE REPORT

B. M. Female; age, 46; no children, no miscarriages; venereal diseases denied. No history of tuberculosis, cancer, or insanity. Typhoid at six; pneumonia at twelve; no attacks of tonsilitis or peritonsillar abscess.

Present illness began in 1911, with frequency and urgency of urination. Dribbling during the day necessitated her wearing a napkin all the time. There was no dysuria or haematuria.

Various physicians had made diagnoses ranging from nervousness to "tumor." In 1912 patient noted that she had a constant sharp pain in the region of the bladder whenever she caught cold, but at no other time.

The patient states that she was operated upon in 1914 for "tumor." No tumor was found, but many intestinal adhesions were freed. There was no relief from symptoms, and the dribbling returned while the patient was still in bed.

During 1914 patient states that she was again operated upon for fibroid of the uterus. No fibroid was found; but the ovaries, tubes, and appendix were removed. Shortly after the second operation bladder pains developed similar to those she had previously suffered from whenever she caught cold. The pain was sharp and constant, radiating, at times, toward the perineum. When the pain was at its worst, the patient was compelled to stop whatever she was doing and remain perfectly immobile in a semi-bent position, with the left thigh flexed onto the abdomen.

Although she visited a number of physicians, complaining of frequency and great pain in the bladder, no cystoscopy was performed.

In 1919 the patient was referred to me by my father for urological examination. Urinalysis showed nothing abnormal. No red blood cells were found, but they may have been present and overlooked, as no special effort was made to identify them. Blood Wassermann was negative.

Cystoscopy under gas-oxygen revealed a whitish area on the left side of the bladder. Two small petechial spots were found above and to the left of the left ureteral orifice and on the edge of the dead area. While under observation and as the water was filling the bladder, suddenly a stream of blood began to flow from the two reddish areas towards the trigone. Urine cultures from the right kidney and the left kidney were sterile. No guinea-pig inoculation was made, but smears examined for acid-fast organisms were negative.

The diagnosis of Hunner's ulcer was made, and the patient was advised to have the diseased portion of the bladder resected. The patient refused operation. Bladder irrigations with silver nitrate were intolerable.

In April, 1920, fulguration of the bleeding areas was attempted. Due to a constant short in the electrical circuit, the trial was unsuccessful. She then went away to the country, hoping to benefit by absolute rest. On her return, her symptoms were unchanged. She still refused operation, but was finally persuaded to have fulguration performed the second time. The bleeding areas were deeply burnt until the hemorrhage stopped. The whitish area for a distance of one centimeter

about the ulcers was also fulgurated. The postoperative pain was controlled with morphine, and the patient left the hospital the next day.

Two weeks later the fulguration was repeated. She had some relief from the first sitting, and in less than a month after the second treatment her symptoms were entirely gone.

The patient has been under constant observation since that time. She voids four to five times during the day and once at night. She has been entirely free from pain throughout the past eight months.

Cystoscopy was performed the latter part of August, six months after treatment. The bladder capacity was 145 cc. The whitish area was still present. The reddened, ulcerated points had disappeared, and no bleeding occurred when the bladder was distended. It is of interest to note that there was no puckering of the mucosa, as one so often finds after fulguration of the interior of the bladder.

DISCUSSION

It may seem rather bold to say that the patient has been relieved by fulguration, in view of the fact that other physicians with large experiences have not had satisfactory results with this method of treatment.

In reviewing the literature, however, it appears that fulguration has not been given a sufficient trial to warrant its disuse. Hunner used fulguration twice in each of two different patients, and each time the patient was so much worse with pain that she refused to have it again.

Bransford Lewis used high frequency current in several of these ulcers, and found them exceedingly rebellious from every standpoint.

Buerger reported success with fulguration in one case characterized by excessive bleeding.

Fronz states that of twenty-six cases of Hunner's ulcer, which have occurred at the Brady Urological Clinic during the past five years, five were treated by fulguration. He concludes that this method of treatment is of value only in those cases in which there is a superficial involvement of the bladder wall and not where all the layers are affected; and that where possible, resection should be done in place of cauterization. None of the other authors have attempted fulguration.

CONCLUSION

The fact that this patient has remained well, though she, no doubt, had a severe lesion as was shown by our records, indicates that treatment by fulguration under an anæsthetic is warranted before the more severe operation of resection of the bladder is attempted.

(323 Geary Street)

PROGRAM OF STATE CONVENTION

The May number of the State Journal will contain the Official Program of our 1922 State Convention at Yosemite. There will be no separate program printed for this convention, so all delegates and other members of the State Medical Society who are going to attend our annual meeting are hereby informed and urged to bring the May number of the State Journal to Yosemite.

The May number will reach you in time to be read and then placed in your grip-sack as part of your necessary Convention Equipment.

THE RADICAL MASTOID OPERATION UNDER LOCAL ANAESTHESIA *

By H. B. GRAHAM, M. D., Shreve Bldg., San Francisco

For ten years it has been our practice to do mastoid operations in acute cases under local anaesthesia, this at the suggestion of Professor Heinrich Neumann of Vienna. The technic is simple, as there is no sensation in the bone, the skin and periosteum alone are desensitized. The customary one-quarter of morphine and one hundred-fiftieth of atropine having been given a half hour before the operation, a skin and periosteum infiltration of 2 per cent novocain solution is made, particular attention being paid to the external canal. The operation is then completed as usually performed, a sharp chisel being used and small, thin chips being removed with each blow of the hammer.

About two years ago I performed a radical mastoid exenteration by this method in a case of tuberculosis of the lungs where it was unwise to give a general anaesthetic, the bridge and small bones being removed under local anaesthesia and gas used for the middle-ear curettement and the plastic work.

Since then I have done two other tubercular cases; all of these have been very satisfactory and have been so much improved in their general condition that one was lead to suspect that the ear condition was responsible for their former lack of improvement. One case showed a quiescent lung condition but was coughing considerably and running a temperature of 99. After the operation the cough completely disappeared and the temperature remained normal, the patient being discharged in four weeks completely cured in respect to his ear and with arrested lung symptoms.

Another patient has shown marked improvement in her temperature and pulse chart and has lost an annoying cough.

That there are cases where the local anaesthetic is the one of choice is without question. Kidney and lung lesions may all be conserved by this method, and it is a question whether it would not be advisable to employ it in the majority of all adult cases. The entire operation has been done under local anaesthesia by Dr. Harold Hays, but I see no advantage in employing as much morphine, or 20 per cent cocaine, as he suggested and the whole operation is much simplified by resorting to five minutes gas at the end of the operation for the middle ear and plastic work.

The operations under local are slightly longer than under ether anaesthesia, as the chiseling must be done more cautiously, but none of these took more than one hour, and one was done in thirty minutes, so the patient is not under a very severe strain mentally or physically. As a rule a brisk conversation is conducted with the patient during the operation to distract his attention from his troubles.

* Read before the San Francisco County Medical Society.

PYELONEPHRITIS: A CRITICAL REVIEW OF 100 CASES *

By LT.-COM. O. C. FOOTE, M. C., U. S. N., San Pedro

This study is based on a critical review of one hundred cases of pyelonephritis, in which a complete urological investigation has been carried out. Pyelonephritis in children and infections occurring secondary to stone, urethral obstruction, prostatic obstruction, or in association with cerebrospinal syphilis, have not been included. This narrows the study, therefore, to the etiology of infections occurring in the kidney secondary to obstructions in the ureter, malpositions of the kidney, or malpositions of the pelvic organs in women, to the question of constant injury to the kidney as the result of gastro intestinal disturbances, and to the mere accidents of infection occurring here as may occur elsewhere in the body.

Sex—Sixty-nine per cent of the patients were females. This preponderance of females is not accidental and depends upon such factors as pregnancy, malpositions of the uterus and bladder, and infections of the bladder secondary to operative procedures on the pelvic organs. It was found necessary to recommend abortion in four cases of pyelonephritis incident to pregnancy because of extreme toxemia. In seventeen others infection had been firmly established at term, probably by long months of interference with urinary drainage from the kidneys. A few pyelograms have been made of pregnant women which showed considerable dilatation of the ureter. It would be interesting to know how constant a condition this is in pregnancy, and whether it may not be responsible, for infection of the kidney, and for other toxemias of pregnancy.

Pyelonephritis was associated with oöphorectomy in seven instances, hysterectomy in two instances, and with a suspension operation in one instance. Cystoscopic study of the bladder after hysterectomy shows intense congestion and, therefore, it is susceptible to infection and may properly be considered the focus of infection for secondary kidney involvement. Catheterization of the female bladder after pelvic operation has long been held responsible for the undoubted occurrence of infection; but if this is the mode by which infection is introduced, it is only because the bladder has been rendered extremely susceptible by injury, and it would seem that as a result of this hypersusceptibility, it might well become infected in other ways than by the introduction of the catheter. Suspension operations as a cause of pyelonephritis have not been sufficiently emphasized. During the slow descent of the uterus the patency of the ureter may be insured as it gradually assumes new positions and new relationships. When the uterus is lifted a considerable distance and put again into its normal position the ureter may be obstructed, and sufficient stasis may occur to result in infection.

It is therefore recommended that in pelvic procedures, which may result in trauma of the bladder, or in which the uterus is to be shifted in its position, the patient should be given, previous to operation, sufficient urotropin to secure prophylactic antisepsis of the urine.

Age—The following table shows the ages of patients on admission:

From	15	to 19	2
"	20	to 24	10
"	25	to 29	8
"	30	to 34	13
"	35	to 39	11
"	40	to 44	18
"	45	to 49	9
"	50	to 54	11
"	55	to 59	9
"	60	to 64	6
"	65	to 69	3

It is interesting to note how few infections were found to occur in youth. A number of cases of pyelonephritis in young children have come under observation, and pyelonephritis is known to be common in children. However, a study of these cases shows that pyelonephritis has two periods in which it is frequent: one in early childhood and the other in adult life. From this the interesting deduction is warranted that nephritis occurring in children, they must recover spontaneously in the large majority of cases. Not included in this series are three cases of pyelonephritis that have been encountered in childhood and which resulted in the death of one, and marked deterioration in health of the other two. In this type of case pelvic lavage should undoubtedly be carried out.

Types of Infection—The right kidney was infected in 18 and the left in 22 patients. In 60 the infection was bilateral. Eighty-four per cent of the patients showed a bacillus infection, and 16 per cent a coccus infection. Although we have not done sufficient bacteriological work to fully identify the organisms in all of the cases, most of these coccus infections showed more involvement of the bladder and were more frequently associated with surface ulceration and hematuria. These cases also were more resistant to treatment.

Pain—It is astonishing how severe an infection of the kidney may be present without pain of sufficient severity to cause distress. The large majority of the cases complain of only bladder disturbances, and it is the absence of pain in the renal regions which formerly led to so marked a chronicity in this type of infection. Eighty-nine of the cases in this group presented bladder symptoms, leaving a small percentage of eleven in which there were no urinary disturbances. Cases of severe infection of the kidney are sometimes subject to renal pain, usually aching in character, and which may be typically renal in distribution.

In other instances the pain in the back may be associated with pain in the upper abdomen or in the region of McBurney's point on the right side, and a corresponding position on the left side. There are still other instances in which infection of the kidney may be associated only with abdominal pain, and when this pain occurs in the region of the appendix it may be extremely difficult to differentiate between acute infection of the right kidney without appendicitis, and acute infection of the right kidney in association with appendi-

* Read before the Obstetrical Section of the Los Angeles County Medical Society.

citis. In either case there is fever, leukocytosis, pain in the region of McBurney's point, and in the actual absence of appendicitis we have observed a slight degree of rigidity and a tendency toward muscle spasm.

Urine—Ninety-five per cent of the cases showed pus in the urine. Sometimes even prolonged observation would show only an occasional pus cell, in spite of the large numbers of bacteria. The absence of pus in all cases of bacterurea has led some to the belief that one of the functions of the kidney is to excrete bacteria. When ureteral catheterized specimen of urine contains bacteria, the kidney is the seat of a definite infection. Prompt smear examination immediately after catheterization are necessary, because if examination is delayed it is impossible to be positive that the infection is in the kidney. The bacteria may be the result of contamination which has been picked up in passing the ureteral catheter through an infected bladder.

Direct slide smears are of more diagnostic value than cultures because cultures are nothing more than a multiplication many times of a misleading contamination. Also it must be remembered that all bacteria do not grow on ordinary laboratory media and many observations have failed to secure satisfactory cultures, even when direct slide smears showed a heavy infection of bacteria.

Macroscopically clear urine may be heavily laden with bacteria, and no urinary examination is of value unless freshly catheterized specimen in the female and freshly voided second-glass specimen in the male are immediately centrifuged and stained. Fifty-nine per cent of the cases showed blood in the urine. Albumen was present in 65 per cent of the cases, and infection was demonstrated in all of them.

Some cases of pyelonephritis have been found associated with parenchymatous nephritis in the same patient. In some of these cases exhaustive searches for focal infection, had been made, but a bacteriologic study of the urine had been neglected. It is possible that infection had occurred in association with a typical parenchymatous nephritis; but if this is the case, infection of the kidney would seem to have played a large part in the renal destruction, for in one of the cases showing a heavy cloud of albumin, the left kidney had been virtually destroyed, and the right reduced considerably in its functional capacity. The kidney itself should be more often considered as a source of its own focal infection, if focal infection bears any great relation to nephritis.

Other Considerations—The fact that pyelonephritis may be latent and is frequently associated with gastro-intestinal disturbances has led some to the belief that pyelonephritis may not be due to fault of the kidney but to constant invasion of the kidney by bacteria as a result of some type of intestinal stasis.

This theory is supported by the frequency of bilateral infection, but infection might well occur on the second side as a result of ascending infection. It is further supported by the frequency of gastro-intestinal disturbances in association with kidney infection, but in such diseases of the kidney as hydronephrosis, tumor, and stone unassociated with infection, it is not uncommon to find gastro-intestinal disturbances of a similar character. If kidney infection were often dependent upon gastro-intestinal stasis, local treatments of the kidney would not often prove successful, or lasting, and it may be that the persistent types of infection in which no stasis of the urine is demonstrated may depend upon constant injury to the kidney through intestinal stasis.

A good many cases of pyelonephritis are undoubtedly dependent upon stasis of the urine as a direct result of obstructions somewhere along the ureter, and dilatation of the ureter is of undoubted value in treating these particular conditions.

CONCLUSIONS

Pyelonephritis occurs more frequently in females than in males, due to pregnancy and gynecological procedures. Gynecological procedures should be preceded by the administration of urinary antiseptics, and these should be continued during convalescence.

Pyelonephritis is extremely common in childhood, is less frequent during youth, and again appears throughout life. From this it is concluded that the large majority of cases occurring in children spontaneously recover. There is an occasional case in which this does not occur and so lowers their resistance as to render them susceptible to other infections proving fatal. Children in whom pyelonephritis exists for a long period of time should be given the benefit of pelvic lavage. There is practically no difference between the right kidney and left kidney in incidence of infection.

Clinical observations of marked bladder disturbances and of infection of the urine subsequently followed by pain in the renal regions and fever have led to the conclusions that ascending infection may occur and probably often accounts for the bilateral nature of the disease.

Pyelonephritis is most often emphasized by bladder disturbances alone, but it may be associated with pain abdominal in type, and when associated with acute infection may be extremely difficult to differentiate from urinary infection associated with appendicitis. Not all cases of pyelonephritis show pus in the urine. Direct slide smears are of more value than cultures. There are infections of the urinary tract other than tuberculosis which, in the absence of urinary antiseptics, will not grow on ordinary media. It is not one of the functions of the kidney to excrete bacteria, and the finding of bacteria in kidney urine is evidence of a pathological process in that kidney. Chronic nephritis associated with infection of the kidney is not uncommon. The presence of large amounts of albumen in these cases has in some instances led to exhaustive studies of other portions of the body for foci of infection with total neglect of the kidney itself as a focus of infection.

Persistent cases of pyelonephritis in which no

stasis is present may have as their cause gastro-intestinal stasis. Pyelograms should be made in cases of persistent pyelonephritis to demonstrate the absence or presence of ureteral stricture.

I wish to express my grateful appreciation of the courtesy of Dr. Arthur B. Cecil, who has so kindly made the material for this study possible.

PERSONAL OBSERVATIONS ON UNUSUAL FORMS OF ACUTE POLIOMYELITIC PARALYSIS.*

With Remarks on Clinically Related Types of Epidemic Encephalitis and Landry's Paralysis

By WALTER F. SCHALLER, M. D., San Francisco

Wickman[1] has classified the following clinical forms of poliomyelitis:

1. The spinal poliomyelitis form.
2. The form resembling Landry's paralysis.
3. The bulbar or pontine.
4. The encephalitic.
5. The ataxic.
6. The polyneuritic (resembling neuritis).
7. The meningitic.
8. The abortive.

Weisenburg[2] in a study of 717 cases in the 1916 Philadelphia epidemic modified this classification as follows:

1. The spinal form.
2. The form resembling Landry's paralysis.
3. The pontine bulbar:
   - (a) Bulbar.
   - (b) Pontine.
   - (c) Pontine bulbar.
   - (d) Pontine spinal.
   - (e) Bulbar spinal.
   - (f) Pontine bulbar spinal.
4. Encephalitic.
5. Cerebellar.
6. Meningitic.
7. Abortive.

It will be seen that Weisenburg's classification differs more particularly in the subdivisions of the bulbar types and the omission of the so-called polyneuritic type. In fact, this author is convinced that the pain and tenderness in the affected limbs, which is so marked and characteristic of a certain group, is not at all of neuritic origin. He found at no time pressure over the nerve trunks producing pain. In favor of the view of the meningeal origin of these sensory disturbances is the rapid subsidence of pain following lumbar puncture. In fact, from the standpoint of therapy lumbar puncture was considered indicated and was done in every patient on admission to the hospital and was repeated as occasion arose according to meningeal symptoms and pain.

In the spinal types Weisenburg makes the point that the progression of the paralysis in both upper and lower limbs is from the proximal portions to the distal portions of the limbs. He makes the statement that there is no record of a single instance in which the paralysis started in the parts below the knee and extended upward. In the recession of the paralysis the distal portions cleared up more rapidly than the proximal. A more rapid improvement in the upper extremities took place when contrasted with the lower extremities. A Landry type is spoken of, but is not considered to be as distinct as is commonly supposed.

Wickman classified Landry's paralysis as a form of poliomyelitis. From a study of two unpublished cases of Landry's paralysis—one in which a necropsy was done and the spinal cord and peripheral nerves studied—it is my personal opinion that it is very doubtful whether this is the case.

Charles K. Mills[3] in 1910, studying an outbreak of poliomyelitis in the Lehigh Valley and Philadelphia of that year, mentions cases reported in Norway and Sweden and in this country showing lesions practically identical with those in the cord, also in the cortex and in the basal ganglions. He speaks of the so-called cerebello rubro-spinal symptomatology—coarse tremor with some paresis and rigidity; the whole somewhat like paralysis agitans, or a mixture of this disease and multiple sclerosis. Although on the lookout for this form, Dr. Mills had evidently not met with an example of it.

This brings up the question of the possible identity of epidemic infantile paralysis and epidemic encephalitis, which has been suspected because of the similarity of the histo-pathological picture. The fact that this latter disease has always been associated in epidemic form with influenza; that it is unusual for it to produce lower motor neuron paralysis and atrophies comparable to poliomyelitis; that adults are predominantly affected; that the seasonal prevalence is different; and that no corresponding increase in the number of cases of infantile paralysis occurred when the encephalitis epidemic was at its height: all these would speak against this identity.

Strauss,[4] Loewe and Hirshfeld claim to have demonstrated a filterable virus in epidemic encephalitis, to have cultivated it and by it to have reproduced the disease in animals.

Although morphologically this organism resembles that described by Flexner and Noguchi in poliomyelitis, it acts differently in its infectiousness in different animals, namely, in monkeys and rabbits. Strauss told me personally this summer that he believes that the virus of influenza and epidemic encephalitis are the same.

Thalhimer[5] confirms the above authors on the specificity of this organism.

Riley[6] and others before him have discussed the spinal forms of epidemic encephalitis. Such a classification may lead to the impression that this clinical picture of encephalitis, and poliomyelitis are similar. This has not, however, been my experience. In a study of some twenty-nine personal cases of epidemic encephalitis gotten together over a year ago, and read before the annual meeting of the Pacific Railway Surgeons, no example of a frankly similar picture to acute poliomyelitic paralysis occurred. Riley describes an irritative type and a paralytic type, this latter often being an end result of the former, and included as a type largely on theoretic grounds.

* Read before the San Francisco County Medical Society Meeting of November 1, 1921.

The irritative type is evidenced either by myoclonic or fibrillary contractions.

In the last number of the Archives of Neurology and Psychiatry (November, 1921) Morris and Jacobson [7] have written an excellent article on acute ascending myelitis of the infectious type, with necropsy findings in two cases. The literature on this type is reviewed; they do not feel that they can conclude definitely that these cases are due to infection by the poliomeylitic virus, although it is equally difficult to deny it.

It may be said, therefore, that there is definite proof lacking in the identity of acute poliomyelitis, epidemic encephalitis, and Landry's paralysis, although it still may be possible that they are different clinical expressions of the same disease. I note that in "Oxford Medicine" Peabody accepts as cause of poliomyelitis the organism of Flexner and Noguchi.

When we are dealing with cases of acute poliomyelitis the clinical forms are so variable that sometimes we are in doubt about the correctness of the diagnosis, particularly at the onset of the disease. I have recently met with two examples, both in adults, in which the first probability which occurred to my mind on seeing these patients was a transverse myelitis.

CASE REPORTS

Case I. F. G. E., male, age 21—Private Record No. 1801—Pre-paralytic onset of three days, commencing with weakness of the legs gradually increasing, and difficulty in starting flow of urine. No pain. Examination revealed a total flaccid paralysis of left lower extremity, and also of right lower extremity excepting some motion at the right ankle. A distended bladder extending almost to the umbilicus necessitated catheterization. Questionable hypesthesia below middle of thighs in both extremities. No disturbance of deep sensibility and no pain on deep pressure of muscles. A history of a penile sore, in spite of negative serological reactions, made it appear probable that this was a case of transverse myelitis on a syphilitic and endarteritic basis. Time showed the error of this view, as the paralysis remained a flaccid one; there never occurred any pathologic pyramidal tract signs; and there were no lasting sensibility disturbances. The muscles eventually showed frank atrophies and reaction of degeneration with tendency to recovery of function especially in the muscles of the right lower extremity.

Case II. B. G., male, age 34—Seen in consultation at the Southern Pacific Hospital, San Francisco, October 18, 1921. Pre-paralytic onset as follows: Eleven days before the paralysis violent pains on both sides of chest, accompanied by slight chill and a temperature of 103° F., made probable a diagnosis of pleurisy or pneumonia. Two days later the temperature fell to normal and the pain disappeared. Three days later the patient returned to his occupation and felt well with the exception of some pain in his chest on deep inspiration. Three days after return to work a return of pain, but at this time across the small of back, radiating down the anterior part of both thighs to the patellae. Pain was lancinating and intermittent and continued for three days. On the third day about 11 o'clock in the morning the patient was unable to cross his legs in bed, and this weakness progressed so that by 7 o'clock that evening he had no use of the lower extremities except to move the toes. The arms were not involved. The examination in consultation revealed a flaccid paraplegia with no discernible involvement of sensation. There was some pain on deep pressure of the affected muscles, but more so by stretching the muscles either by passive flexion or extension, and particularly by the Kernig maneuver. There was some motion left in the toes of both feet but no motion at the hips, knees or ankles. In this case, as the foregoing, patient was obliged to be catheterized twice after the onset of paralysis. This case is of such recent occurrence that marked atrophies have not yet developed.

Another clinical type which has interested me very much is the predominant type associated with distressing and continued pain in the affected muscles. We have investigated these cases by lumbar puncture to determine whether the meningeal reaction ran pari pasu with the subjective sensory disturbances.

Case III. R. C., male, age 18.—Stanford Dispensary No. 94194—Pre-paralytic symptomatology of nervousness, irritability, sleeplessness and diplopia following overwork. The paralysis of the extremities began in the left arm, extended to the left lower extremity, then to the right arm, and then to the right lower extremity. Whereas, objective sensation was quite normal in the affected extremities, the patient noticed from the beginning marked sensitiveness of the muscles especially on pressure. The examination showed a flaccid quadriplegia with hypotonia, areflexia and atrophy much more marked in the proximal than the distal parts of the extremities, although the patient was paralyzed to the extent that he could not assist himself or move from the supine position in bed.

The following were the lumbar puncture findings in this case under the following dates:

	Pressure	Leucocytes	Globulins
April 22, 1921.....	250 mm.	18.1 per cmm.	increased
April 26, 1921.....	?	33.7 "	"
May 2, 1921.....	180 mm.	10.9 "	"
May 11, 1921.....	85 mm.	23.1 "	"
May 18, 1921.....	150 mm.	10.9 "	"
May 24, 1921.....	.....	18.6 "	"
June 2, 1921.....	145 mm.	28.1 "	"
June 9, 1921.....	.....	126.8 "	"
June 23, 1921.....	140 mm.	10.6 "	"
July 5, 1921.....	70 mm.	8.1 "	"

Following the puncture of May 24, June 1, and June 9, mercurialized autogenous serum was injected in order to stimulate the leptomeninges to greater effort to overcome the apparent subacute infection of the subarachnoid spaces. When the patient left the hospital on July the 12th the pain in the muscles although less was still present.

Case IV. A. N., female, age 11—Stanford Dispensary No. 97459—Entered hospital with complaint of paralysis of both lower extremities from the hips down. Duration about two weeks. Prodromal symptoms of "growing pains" in the legs, especially in the calves, and some headaches; increasing pain in the legs and in the lumbar region, with chilly sensations. Two days after this onset fell in attempting to walk and afterwards inability to use the lower extremities. Immediately prior to the paralysis, sensation of numbness and tingling in the feet. Examination: Both lower limbs held flexed on the abdomen, and legs flexed on the thighs, with some motion in the right toes. Exquisite tenderness of muscles on manipulation; areflexia, hypo-tonicity. Sensation was unaffected. The examination was made exceedingly difficult on account of the great muscle tenderness. Active motion was very difficult to determine on this account, although the flexion posture of the limbs suggested that more active motion was possible than could be elicited.

A lumbar puncture on this patient done two days after admission showed a considerable in-

crease in the globulins and a leucocyte count of 11.8. On account of the faulty position of the lower extremities in flexion and the possibility of contractures, the orthopedic surgeons were called in consultation. On September the 1st, or about three weeks after patient was admitted, a lumbar puncture was done under great difficulty, the fluid being contaminated by an admixture of blood. There were but 10.5 leucocytes per cu. m. m. with some increase in the globulin, which might have been accounted for by the normal blood content of white cells. This count was, however, not satisfactory. This patient left the hospital after the last puncture and has not since been heard from.

Case V. S. R., male, age 3½—Stanford Dispensary No. 98753—Pre-paralytic symptoms lasting three days, commencing with headache and a temperature of 102° F. The fever fell on the second day, but the child was languid and rather stuporous. The third day he was unable to stand because of paralysis of the right leg. This was on September the 20th. Examination showed flaccid paralysis of the right leg in extension, the leg being externally rotated and the foot everted. The tendon reflexes of this extremity were not elicited. No evident objective sensory disturbances. The left leg showed no paralysis. A very striking feature of this case was pain and tenderness on passive motion or pressure of the affected leg muscles, and also of the left leg muscles, but to a considerably less extent. The spinal fluid examinations were as follows:

	Leucocytes	Globulin
September 23, 1921.....	32	positive
September 27, 1921.....	11.2	"
October 12, 1921.....	48	"
October 29, 1921.....	3.1	negative

When last seen (October the 29th) the power of flexion and extension of the right thigh was possible, but no motion was present at the knee or in the toes. The tenderness was decreasing but still present.

It occurred to us to seek some references regarding the spinal fluid content following acute poliomyelitic paralysis. Whereas Draper gives no data concerning the fluid after the first few days, Ruhrah and Mayer state that "cells disappear rapidly so that after two weeks the count is either normal or nearly so."

This is probably the case in most instances, but in our series the persistence of the fluid reactions most probably indicated a meningeal origin of pain in the third and fifth cases, the former showing an increase in the cells for more than two months, and the third not clearing until one month. Unfortunately, the most typical case of pain, or the second case, we were not able to thoroughly study from the standpoint of meningeal reactions.

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(909 Hyde Street.)

STANFORD COLLOQUIA AT THE SAN FRANCISCO HOSPITAL

Surgical — (By Dr. Sterling Bunnell) — Our first patient is a middle-aged Mexican woman, with extensive tubercular enlargement of the cervical glands of all of the triangles in the left side of the neck. There is an especial enlarged one, probably with abscess, under the upper part of the sternocleidomastoid muscle. She noticed enlarged glands here for six years, though the greatest enlargement has taken place in the last month; this probably from abscess formation. Pathology of this degree is beyond cure by X-ray. I feel that X-ray and hygiene is the best treatment for beginning tubercular adenitis.

Surgery of this condition has gained ill repute because often merely the enlarged glands, and not the gland bearing tissue, has been removed from the neck. Considering this, it is not at all surprising that recurrent cervical enlargements are so frequent after operative removal. It is my conviction that the proper way to remove the glands and gland bearing tissue is en bloc, just as we do for carcinoma. It has been my experience that whenever the whole tubercular gland bearing mass has been removed in one piece, without tearing the tissue and spreading the germs about, that that patient has been cured, providing that the tonsils are removed and that there is no other tubercular focus. In such cases I have never seen local recurrence. A block dissection was then done and because of the magnitude of the operation it was followed by a transfusion of 900 cc. of blood. This reduced the pulse from 140 to 90.

The next patient is a woman forty years of age and very fat, who has had typical attacks of gall stones for six years. The present attack has lasted a week and was accompanied by a temperature of 101. About the lower part of the abdomen is a huge roll of fat, which suggests the necessity for a lipectomy, but peculiarly enough the layer of free peritoneal fat is as scanty as in a thin person. This, together with the finding of an infantile uterus, suggests hypopituritarism. The gallbladder is somewhat enlarged and congested, slightly thicker walled and more gray than normally and adherent to the neighboring viscera. The surface of the liver in the immediate vicinity shows a ribbing of scar tissue and along the cystic duct and common duct can be felt several enlarged glands. The pancreas is slightly harder than normal. Many stones can be felt in the gallbladder. In this case we have a full set of signs of cholecystitis. Quite often, however, we have a good history of cholecystitis and no gross signs in the gallbladder, except perhaps the enlargement of the telltale gland along the cystic duct. In such a case it is best to be guided by the history and remove the gallbladder. . . .

Our next case is that of an injury to the knee joint, caused by sitting upon it with the leg in the abducted position. There is local tenderness over the internal lateral ligament and pain is produced when the leg is abducted. There is also a greater degree of lateral motion in the injured leg compared with her normal leg. It

is, therefore, concluded that there has been a rupture of some of the fibers of the internal lateral ligament. This ligament is uncovered through a semilunar incision and a longitudinal incision is made through it. Through a small hole in the capsule of the joint the internal articular cartilage is explored and found to be normal. For a distance of about two centimeters the fibers of the internal lateral ligament are seen to have been torn. A strip of fascia is taken from the fascia lata of the same leg and transplanted under the internal lateral ligament, contacting with the tibia below and the femur above and the incisions are repaired. The free fascial graft, together with the resulting reaction in the surrounding ligamentous tissues, will result in so re-enforcing the internal lateral ligament as to effect a cure. This principle can be applied to a chronically spraining ankle. Fascia and ligaments are the safest tissues to graft and will live even when but one surface is contacted with vascular tissue.

Obstetrical and Gynecological—(By F. R. Girard)—Ovarian transplants: The patient before us is a gravida IV para II, thirty years old. Menstruation of the normal thirty-day type of four to five days' duration began at 14. Since an abortion, six years ago, menstruation has been every three to five weeks, accompanied by severe pain in both lower quadrants, down thighs and associated with backache. Vaginal examination shows no evidence of inflammatory disease; a small cervix with bilateral lacerations. The uterus normal in size, position, outline and consistency, but motion is limited by adherent adnexa to lateral pelvic walls. Operation shows both adnexa buried in dense adhesions to lateral walls and floor of the pelvis; left adnexa also adherent to sigmoid; posterior surface of cervix adherent to sigmoid; body of uterus normal; bilateral salpingo-oöphorectomy; blood supply of both ovaries badly damaged during enucleation and much raw surface on ovaries; bilateral hydrosalpinx.

Comment: A healthy uterus in a thirty-year-old patient makes this an ideal case for ovarian auto-transplantation. It is evident that these ovaries must be removed, and by removing the cystic areas from both ovaries and also the markedly thickened and sclerotic capsule we can place two grafts at the upper and lower angles of the incision in pockets prepared on top of the anterior rectus sheath.

Question—What are the chances of the grafts sloughing out?

Answer—By using multiple small grafts a much larger surface is obtained for establishment of new blood supply and by being careful to use ovaries which are not involved in acute inflammatory processes I have been able to secure grafts which have lived and functionated in all of the twenty cases of my experience.

Question—How long do you expect it to take before menstruation is re-established?

Answer—That varies with different patients. The shortest time from operation to first menstrual flow was five weeks and the longest time was six and a half months. Regarding length of time that patients menstruate after auto-grafting, my personal experience has been that cases grafted approximately two and a half years ago are still menstruating regularly and in a satisfactory manner. Professor Tuffier of Paris has, from a large series of cases, determined that the menstrual life after auto-grafts is approximately from two and a half to three and a half years. It is most gratifying to see the freedom from the distressing nervous, atrophic, nutritive and vaso-motor disturbances that these patients have when auto-transplantation has been done and menstruation preserved.

Medical Fees Under the Workmen's Compensation Act—It is believed that concrete examples of rulings upon medical fees may be of use to physicians in more ways than one. The following ruling in an actual case is furnished by Morton R. Gibbons, M. D., Medical Director, Industrial Accident Commission:

"My understanding is that your services involved a journey of 106 miles, being 53 miles one way; that the injury for which you attended the injured employe was a compound jagged fracture of the humerus three inches below the head, dislocation of the head of the humerus, and twelve small lacerations and four large lacerations, together with dangerous hemorrhage from many lacerated blood vessels. Your services included reduction of the fracture under anaesthesia and reduction of the dislocation; also the repair of twelve small wounds and four large wounds above mentioned; also ligation of several bleeding vessels. In addition to this there was the necessary treatment of shock, and application of retentive appliances.

According to the Fee Schedule you are entitled to fees as follows:

For reduction of the fracture of the humerus, compound	$ 60.00
Reduction of dislocation of the head of the humerus with complications	20.00
Repair of twelve small wounds	20.00
(N. B.—In multiple small wounds it is not logical to charge full fees for each.)	
Repair of four large wounds	20.00
(N. B.—It is noted that several of these wounds are of great extent, more than contemplated in the minimum of the Fee Schedule.)	
Mileage, 53 miles one way	39.75
For sutures, medicines and materials	2.70
This makes a total of	$162.45

A large latitude in judgment must be left to the surgeon who sees the case in emergency. If in his judgment, knowing his own facilities, his own skill and experience, and most of all, the needs of the patient, it would be better to treat him extensively without delay, he should certainly do so. Failure to perform the proper service at the proper time when it is possible to do so, entails danger of malpractice suit against the doctor, no matter whose rule he may be following or what employer's criticism he may incur later.

From the information which you give me and what I gather from your correspondence, it is my opinion that you did right in treating your injured man as you did."

The Hotel Casa Del Mar, near Venice, California, will be opened in a few days as a hospital of about 100 beds. William G. Lutz is superintendent.

The William H. Lewis Memorial Hospital has been opened at Atascadero, California. The hospital has 30 beds, including 12 private rooms. Charles A. Love, M. D., is director of the institution.

EDITORIALS

THE NOMENCLATURE OF DISEASES OF BONES AND JOINTS

The human mind, on recognizing an object, endeavors to put a name to it, and this is quite necessary in order that description and discussion may take place. Unfortunately, the mind has also a tendency to delude itself with the thought that investigation and exact knowledge may be avoided, provided an object be endowed with a name sufficiently scientific in its sound and all-embracing in its scope. Nomenclature, then, instead of being a help may become a hindrance, and the investigator may find himself hopelessly tangled in a net of ambiguous terms, which prevent him from making his meaning clear.

Diseases of bones and of joints well illustrate this point, probably on account of the obscure pathology of some of them. As the pathology of tuberculosis has become better understood, such terms as "caries sicca," "white swelling," and "scrofula" have slowly disappeared, but the nomenclature of the non-tuberculous arthritides is still so confusing that a reader is often quite unable to distinguish the meaning of the author he consults. What is arthritis deformans, osteoarthritis, rheumatoid arthritis, destructive arthritis, proliferative arthritis, degenerative arthritis, hypertrophic arthritis, atrophic arthritis, villous arthritis, metabolic arthritis? What is chronic rheumatism? The originator of each of these terms probably thought he knew what he meant by it, but how is anyone to guess at his meaning? Or how ascertain if he had any idea of the subject he was discussing? Osteoarthritis is, of course, an inflammation involving bone and joint, but its sponsor evidently does not wish us to attach that meaning to the term. Metabolic arthritis means everything and nothing. Villous arthritis is an arthritis characterized by the production of villi in the synovial membrane. The formation of villi is the reaction of the synovial membrane to any irritant, and is present in all forms of arthritis.

What is ankylosis? Let us ask a dozen medical men and tabulate their answers. Then let us attempt to define the various kinds of ankylosis, and again we are at sea.

A joint mouse has in our minds a fairly definite place, but to express our exact meaning is no easy task. The true joint mouse, as we well know, is found almost exclusively in the medial condyle of the adolescent femur. Some study is necessary to find out the exact reason for this, but the Germans avoided the difficulty by predicating a special disease for the condition and attaching to it the mouth-filling and awe-inspiring term, "osteochondritis dissecans." Accept the disease and the name, and no further investigation is necessary.

A very rare condition in the new-born is characterized by such a brittleness of the bones that they fracture easily and often. Call it "fragilitas ossium," and let it go at that. If we are still unsatisfied, change the Latin to Greek, and substitute "osteopsathyrosis idiopathica." If uttered glibly enough, this term will defy pursuit and will serve to quiet almost any class of students.

In 1903 Osgood and Schlatter discovered independently and almost simultaneously a peculiar condition of the tibial tubercle in the adolescent. In spite of the disadvantages of calling a disease after the name of its discoverer, until the nature of this affection is definitely determined, most of us are fain to name it Osgood-Schlatter disease. But lo! Certain ambitious observers think, after seeing two or three cases, that they have solved the problem and attempt to settle the matter by clapping on a name. According to all the rules of the game, Ebbinghaus must be right, for his title is almost as imposing as all the rest—"epiphysitis tibiæ dissecans traumatica adolescentium." Poulsen is a poor second with "periostitis tuberositas tibiæ," while Leclerc, Blencke and Kennedy trail far behind with "apophysitis tibiæ" and "acute epiphysitis."

Many examples might be multiplied to show the need of intensive study of bones and joints, in order to clear up the confusion. The pathologist and the clinician must work hand in hand, or better yet, one man must combine pathology with clinical medicine and surgery. As a preliminary to his study, let him decide on a definition of the active constituent of all bones—the marrow.

STOCK HOSPITAL PROPAGANDA

A second word of caution is issued upon this subject because, since our former editorial, some physicians have invested in hospital propositions that are bound to be failures. Physicians should require that new projects have the endorsement of their organizations before taking part in them.

Many of the various new activities that are springing up all over the State, and all over the country for that matter, are sound and deserve the fullest co-operation and support both in service and money. Other proposed hospitals, sanitariums, clinics, associations and what not are impracticable, visionary, unsound or dishonest. The records of many of the good, as well as the unsound propositions, are in the offices of your organizations. Investigate before you endorse any proposition with your moral support, service or money.

ARE YOU GOING TO ST. LOUIS?

Members of our Society, who intend to go to the A. M. A. meeting at St. Louis, from May 22 to 25, are requested to write to the Secretary of the Medical Society of the State of California regarding the matter of transportation and accommodations.

If 125 or more physicians wish to go from Yosemite to St. Louis we will be able to secure special accommodations and other attractions for our members. In order to have a census to present to the railroad company, it is urgently requested that you inform the State Secretary without delay of your intentions.

MORE ABOUT "ENDOCRINE GLANDS"

Doctor, have you read the book by Louis Berman, M. D., entitled "The Glands Regulating Personality: A Study of the Glands of Internal Secretion in Relation to the Types of Human Nature"? Have you read the extensive reviews of this book in the various magazines and newspapers? You should read them carefully and thoughtfully because thousands of people are reading them and you should be prepared to deal intelligently with those of your own patients who will need your services after such reading.

This book is a remarkably clever and attractive blending of known facts about an important and only partially understood subject with logical, illogical and visionary theories in such a way that the average reader accepts the whole thing as a fact.

Multitudes of readers will act upon the "knowledge" they obtain from this book and from its extensive reviews to "prolong" their lives, change their "personalities," restore their "lost vigor" or cure their diseases by purchasing and using these dangerous preparations now everywhere available, or by becoming patrons of some of the numerous advertising fake healers who already are reaping harvests from this field.

Publications about such subjects with more positive differentiation between fact and fancy are useful to physicians and other serious students, but they would have no great "news" value and no "publicity" or "propaganda" value under these circumstances.

Stories like the book in question are being issued about other unsolved questions of pathology, and no doubt more will be forthcoming. They do a great deal of harm of several varieties and little, if any, good in any way.

Of course, there are problems—great problems—bound up in the physiology, pathology, diagnosis and treatment of disturbances of the glands of internal secretion. There is and has been for many years an ever advancing chain of new knowledge being produced from many sources tending toward solution of the problems. All that is safe of this new knowledge is taken advantage of by physicians in the diagnosis and treatment of disease, and such progress, research, and practice should and will continue.

However, serious thinkers regret the introduction of literature which, whatever the intentions of the authors, tends to deceive the general public and lends itself so readily to the uses of propagandists and even unscrupulous persons for commercial purposes. This to the detriment both of legitimate science and of the public health.

OVERSPECIALIZATION IN PUBLIC HEALTH WORK

We are hearing and reading a lot about overspecialization in the practice of medicine and the importance of this development in the constantly increasing cost of medicine to the public.

We are not yet hearing so much about the vastly more important problem of the enormous cost of public health and public welfare and the more certain element of overspecialization in producing the excessive cost.

The generally recognized specialties in diagnosis and treatment of disease are less than ten. They are all in the hands of physicians. The specialties in "prevention" as now practiced and paid for range from twenty or more in rural communities to hundreds in some cities. Some of these are the legitimate medical and government agencies usually operated by physicians and other health officers of experience.

The array of so-called voluntary organizations is bewildering in their number, in their activities, in the changing and often doubtful quality of leadership and in the amount of money they spend.

The contributing public is becoming curious, and one of these days someone is going to take the trouble to find out how much money is collected, donated, levied by taxes and otherwise provided by the public for "welfare and health work"; they will show when, where and what for this money was used, and when that is done and published there is going to be a slump in organizations devoted to "uplift."

DANGERS IN EDUCATION

The dangers of government bureaucracy, politics and over-organization in education are emphasized in the annual report of the President of Columbia University just issued. We read:

"One of the most noteworthy of recent developments in American life is the zeal with which machinery is designed and built ostensibly to serve various public interests and undertakings, but in reality to control them. Perhaps in no other way is the decline of faith in liberty so clearly marked. . . .

"So far as education is concerned, this has been over-organized for a long time past. Too many persons are engaged in supervising, in inspecting and in recording the work of other persons. There is too much machinery, and in consequence a steady temptation to lay more stress upon the form of education than upon its content. Statistics displace scholarship. . . .

"It is now proposed to bureaucratize and to bring into uniformity the educational system of the whole United States, while making the most solemn assurance that nothing of the kind is intended. . . . If tax-supported education be first encouraged and inspected, and then little by little completely controlled, by central authority. European experience shows precisely what will happen. . . .

"The true path of advance in education is to be found in the direction of keeping the people's schools closely in touch with the people themselves. Bureaucrats and experts will speedily take the life out of even the best schools and reduce them to dried and mounted specimens of pedagogic fatuity. Unless the school is both the work and the pride of the community which it serves, it is nothing. . . .

"It is fortunate that Columbia University, a public institution, was founded and is supported by the State in the field of liberty, and that it is free to carry on its work beyond the reach of the deadening hand of government."

There is more in this report that every person interested in education should read.

STATE SOCIETY

ABSTRACTS FROM THE MINUTES OF THE ONE HUNDRED AND TWENTY-NINTH MEETING OF THE COUNCIL OF THE STATE MEDICAL SOCIETY.

(Held in Los Angeles, January 28, 1922.)

Industrial Accident Work—The report of the State Society's committee on Industrial Accident Insurance Work was considered by the Publicity Bureau, where a few minor changes in the report were suggested, and the matter in this shape came before the Council. Upon motion of Parkinson, on behalf of the committee, it was unanimously

RESOLVED, That the amended report, containing the modifications and changes suggested by the Publicity Bureau, stand on the minutes of the Council as the original report of the committee, this report being as follows:

REPORT OF COMMITTEE ON INDUSTRIAL ACCIDENT INSURANCE

Adoption of Blanks and Fee Schedule—The committee requests that it be authorized to hold conferences with insurance companies and with individual representatives of same, to secure the general adoption of the Society's blanks, which automatically adopts the fee schedule.

Increase in Fees—The committee believes conditions at present are inopportune for seeking an increase in the present fee schedule and recommends that action be deferred until prices have been stabilized and the business outlook improves.

Enlargement of the Panel—In line with its former suggestions, the committee believes steps should at once be taken to enlarge the panel. It recognizes that, while many physicians believe the injured employe should have the right to choose his medical attendant, this right cannot be conceded by those legally responsible for his care and legally liable for every expense attached thereto. At the same time there is no reason why men competent to do surgical work and to make the necessary reports should not be permitted to treat all cases referred to them by employers.

The question of professional competency is not based upon personal preference, nor can it with certainty be determined by a layman nor, indeed, by an insurance company not employing a medical director. The medical profession is the only judge of the qualifications of its members and their efficiency in the various specialties.

The committee therefore recommends that various County Societies be requested to assume this responsibility toward the State and that each Society be instructed to certify to the secretary of the State Society a list of its members competent by education, training, experience and licensure, to do the industrial surgery required in industrial accident insurance, willing to undertake this work and willing to make prompt and accurate reports of all cases. If a physician claims to be practicing any specialty exclusively, his specialty should be indicated, with his experience and qualifications as above mentioned.

It is recommended that the County Societies assume the responsibility not only of providing the State secretary with this original list, but of providing at least a monthly list showing changes in this panel.

No attempt should be made to indicate the manner in which any society shall reach its conclusions, nor is any machinery suggested for determining the result. It must, however, be understood that every society certifying a panel will stand sponsor for the accuracy of the statements given as to the men's education, training and other qualifications to do insurance work, and agrees to demand from them and extend to them the customary professional support and courtesies.

The committee believes that if this course be adopted by the County Societies it will result in better treatment for beneficiaries and a more equitable distribution of industrial medicine practice, and that carriers when assured of these facts will accept the plan.

JAMES H. PARKINSON,
JOHN H. GRAVES,
GAYLE G. MOSELEY.

Question of Laymen Contracting for Accident Insurance Work and Hiring Physicians to Do It—This matter being before the Council, it was unanimously resolved that the matter be investigated by the Publicity Bureau and reported upon at a subsequent meeting.

Program for 1922 Meeting—The secretary discussed the progress being made by the Program Committee and asked for approval or instruction upon a number of points, the only one requiring action being to the effect that the report of the Committee on Industrial Accident Insurance be presented at one of the general sessions by the chairman, James H. Parkinson, instead of before the House of Delegates only, as usual.

Action by the Council—Upon motion regularly moved and seconded, it was

RESOLVED, That the report be read to one of the general sessions, and that the House of Delegates be requested to recognize this as the official presentation of the report.

Rebates and Commissions—Communications in the hands of the secretary suggested that the Council reiterate its stand in interpretation of the ethics upon the problem. The following resolution was unanimously passed:

RESOLVED, That the Council believes that any agreements or understandings between members of this Society and pharmacists, whereby money or any other valuable consideration is paid to physicians in connection with their prescriptions, is unethical and derogatory to the medical profession. Further, that the writing of prescriptions by physicians on blanks furnished by druggists or bearing the names of druggists should be discouraged as open to misconception.

Convention Number of the State Journal—The Council approved the policy of making the May number of the State Journal the "Convention Number" and including the program therein instead of printing a separate program. They furthermore approved as a matter of policy the issuing of a daily Convention Bulletin under such conditions as may be brought about by the chairman of the Publicity Committee and the executive officers of the association.

Rules of Policy Regarding Publications in the Journal—The Publicity Bureau presented a number of rules upon this point. These rules were unanimously approved by the Council and are as follows:

1. The Journal will not publish original manuscripts except as presented by members of the State Society; provided, in the case of invited guests to the State Society or one of its constituent society meetings or invited guests to some special conference or meeting, they may be accepted at the discretion of the editor.

2. Except in special instances approved by the Publicity Bureau, manuscripts will not be accepted for publication in the Journal until they have been presented at a State Society meeting or a meeting of one of its constituent societies.

3. Manuscripts consisting essentially in individual case reports, unless these reports deal with extremely rare or unusual conditions, are not considered as being suitable for the Journal.

4. The editorial staff, as is usual in publications, shall reserve the right to modify, condense, extend or reject any manuscript from any person.

5. As a matter of policy, which may be changed only in special instances, the Journal will not accept articles of more than 5000 words and will give preference to those of from 2000 to 4000 words.

6. The Journal being intended to represent the entire membership of the State Society, the editor will, as far as feasible, give preference to material for publication that promises to be of the greatest good to all members of the profession.

7. In the selection and rejection of manuscript the editor and the Publicity Bureau will be guided in their action by the merit of the paper and to a limited degree by expediency. No discrimination will be made between the manuscript read at the State Society meeting and one read at any constituent society meeting. The determining point in both instances shall be the merit of the paper, and neither the Publicity Bureau nor the editor is obligated to publish any manuscript simply because it has been presented to either the State meeting or any other medical meeting.

8. The following information and rulings regarding articles for publication in the Journal are adopted with slight modifications from the A. M. A. "Style Book." This pamphlet of sixty-six pages, and which costs 25 cents, is a necessity to any medical author, and it is urgently recommended that physicians who read papers before medical societies or who write for publication secure and use this pamphlet:

Acceptable Paper—In order to be acceptable for the Journal, a paper must either (1) contain and establish positively new facts, modes of practice or principles of real value; (2) embody the results of well-advised, original researches, or (3) present so complete a review of the facts concerning any particular subject as to enable the writer to deduce therefrom legitimate, important conclusions. Our medical literature is loaded down with articles which do not come up to any of these specifications.

The Spoken and the Written Word—The requirements for a paper to be read before fifty or a hundred physicians are necessarily different from those for a paper to be published in a journal in which it may be read by thousands. Hearers will listen to a lengthy paper, even though it be rambling and discursive; readers of the same paper will impatiently turn the pages to the next article. Anyone can write a long paper, but presentation of facts concisely marks the experienced, careful writer. Every writer should realize this fact: the longer the paper, the fewer the readers.

Simplicity—Avoid (1) unnecessary, irrelevant or second-hand information; (2) needless references to literature; (3) extensive quotation; (4) elaborate language.

Carefulness—Hasty, careless composition is inexcusable.

A suitable title, suggestive subheads, a clear summary, and cogent conclusions represent the framework of a well-constructed paper.

The Right Title—Titles should be explicit and descriptive. They should be brief and definite.

Summary and Conclusions—The summary—the brief abstract of the article—may appear as an introduction or at the close; the conclusions—the deductions drawn from the cases, experiments or other facts set forth—appear always at the close. The value of the summary and conclusions is less appreciated by the average writer than by the average reader. The busy physician looks at the title to see if the subject interests him, glances at the subheads to see the phases considered, and then turns to the summary to get the gist of the article. The summary and conclusions will be reproduced by journals which otherwise would not take the trouble to abstract the article, thus presenting it to a larger circle of readers.

Negative Findings—Space should not be devoted to unimportant findings, or those which have no bearing on the subject under consideration. Negative findings are of value in few instances.

Exclusive Publication—Articles are accepted for publication on condition that they are contributed solely to this Journal.

Neatness—Illegibility, close spacing or other marked defects in the preparation of a manuscript, as well as errors in spelling, grammar or diction, give the impression that the research or observation embodied in the article is equally slipshod and inaccurate, and may turn the scale against its acceptance by the Journal.

Illustrations must illustrate; they should be clear, distinct pictures. To show instruments, apparatus, diagrams of operative technic, etc., drawings with pen and black ink on hard white paper are usually preferable to photographs.

Roentgenograms—Unless exceptionally clear and distinct, these are unsatisfactory. A roentgenogram which must be studied with much care in the original in order to find the significant points will probably show no details at all in the reproduction. When it is possible to use a diagram instead, this is frequently more graphic and hence more acceptable.

Character of Reproductions—The illustrations found in the Journal are known as "halftones" and "zinc etchings." A halftone can be made from any copy furnished, whether it is a photograph, a washdrawing or a linedrawing. Halftones are used almost exclusively in reproducing photographs and washdrawings. Zinc etchings are made from linedrawings. A zinc etching cannot be made from a photograph or from a washdrawing. Halftones require a "supercalendered" or "coated" paper; zinc etchings reproduce satisfactorily on soft or "machine-finished" paper.

Proof—Unless otherwise arranged in advance, proof of original articles is submitted to the author before publication.

SUMMARY

Plan your paper before you write it.

Make your title descriptive but brief.

Use subheads.

Number all pages consecutively.

Put your name on your manuscript and on each illustration.

Be brief.

Write in a simple, careful, grammatical style.

Delete all non-essential words, phrases, sentences and paragraphs.

Provide a summary if your article is long; give your conclusions if any were made as a result of your observations.

Verify the spelling of technical and unfamiliar words, and of all proper names.

Don't call the patient a case.

Don't copy a report of a case from the clinical record sheet. Tell the essential parts of the story in narrative style.

Send the original, not the carbon copy, to the publisher.

Fold, do not roll, manuscripts.

Manuscripts should be typewritten, double-spaced, on one side of the paper only.

Illustrations must illustrate.

Do not send negatives or glass slides. Send prints on glossy paper.

Number all illustrations consecutively.

Provide a legend for each illustration.

Write legends consecutively on a separate sheet of paper at the end of your manuscript.

Patient's consent must be secured to the reproduction of photographs.

Correct and return proof promptly.

Verify all facts and be careful to omit anything of a libelous nature, both in the written word and in the illustrations.

Junior Medical Societies for Medical Students—The question of forming Junior Medical Societies from among the members of the different medical schools of the State was discussed. The advantages of having these students operate their own medical society under the same constitution and by-laws that a regular medical society is operated under, insofar as this is feasible, were discussed, and it was felt that this should be of advantage to students in preparing them to take up the broader duties of citizenship after they have received their degrees. It is understood, of course, that such societies would have no authority whatever to take action binding on the medical profession, nor would they have power to represent the medical profession. It was suggested that there might be one unit society for each of the three medical schools in the State, made up exclusively of its student body, and that these societies recognize the advisory or censorship control of the Council of the State Medical Society.

Upon motion regularly made and seconded, it was resolved, that this matter be referred to the medical schools of the State of California, and that, if they approve as a matter of policy, the Council approve the general policy laid down and that the matter be referred to the Publicity Bureau with instructions to formulate rules and regulations.

Accredited Agencies and Other Accredited Representatives for the Journal—Applications to become accredited agencies for selling individual copies of the Journal and for securing subscriptions upon a commission basis being before the Publicity Bureau, it was voted by the Publicity Bureau to recommend to the Council that they approve a policy of establishing accredited agencies and recognizing accredited representatives for the Journal, the number of agencies and the conditions under which they work to be approved by the Publicity Bureau.

Action by the Council—Resolved, That the agencies should be established, the price to be charged them to be fixed by the Publicity Bureau.

Biographical Data on Members of Our Association—The question of obtaining biographical data of our members was brought up for discussion. It was recommended that in sending out the official membership cards to individual members, mailing facilities be taken advantage of by enclosing with this membership card a letter (form submitted) inviting our members to furnish biographical data for the files of the State office.

RESOLVED, That this recommendation be approved and the secretary be instructed to have a supply of these form letters printed.

New Licentiates in Medicine in California—The question was discussed of greeting new licentiates in California by sending each one a letter from the State office (for msubmitted) and asking them for biographical data.

RESOLVED, That the form letter be approved and the secretary instructed to have a supply printed, to be sent to all who are eligible for membership as soon as notice is received from the Board of Medical Examiners that they have been licensed in California.

Superintendent of Publications—Realizing the constantly increasing importance of the mechanical and typographical features of our State Journal and other publications, and in consideration of the splendid willingness of Mr. William H. Barry of The James H. Barry Company to aid and assist the Society in all of its work, upon motion it was

RESOLVED, That Mr. William H. Barry be appointed "Superintendent of Publications," his name to be carried on the Journal with the other members of the editorial staff; this appointment to be subject to control by the Publicity Bureau of all conditions and problems arising out of this arrangement, and to be without salary.

Reassignment of Editorial Pages in the Journal—The question of reassignment of editorial pages to the center of the Journal instead of the first pages as at present, was discussed. As it was felt that this would comply with the general usage in publications and as it would also aid materially in the mechanical work of the Journal, it was

RESOLVED, That the editorial pages should be assigned to the center of the Journal and the scientific articles should comprise the first pages.

Medical Advisory Committee—The secretary presented a circular letter from a "Medical Advisory Committee," Dr. F. H. McMechan, secretary, Avon Lake, Ohio. Upon motion it was

RESOLVED, That the Council lay this matter on the table and advise every county medical society in the State to do the same thing.

Question of Instructing Delegates to the American Medical Association—After discussion and upon motion regularly made and seconded, it was voted that the following resolution be introduced by the Council to the House of Delegates at the next annual meeting:

RESOLVED, By the House of Delegates of the Medical Society of the State of California, That it is the policy of this Society to instruct by resolution, either of the House of Delegates or of the Council, the delegates of this Society to the American Medical Association, on all matters of national concern upon which this Society either has or desires to institute a definite policy, or which in the opinion either of the Council or the House of Delegates peculiarly affects this Society.

Assessment on Indemnity Defense Fund Members—The fact was brought up that it will be necessary for the Council to take definite action in levying the assessment on all old members of the Indemnity Defense Fund in the sum of $5 for the year 1922 and for each year thereafter until otherwise ordered; provided, that the admission fee for new members shall remain at $30, in accordance with the authority conferred upon the Council by the House of Delegates at the 1921 meeting. Upon motion regularly moved and seconded, it was

RESOLVED, That the recommendation of our attorney that this matter be held over for consideration at the Yosemite meeting, be adopted.

Local Transportation in Yosemite—It was reported by the Publicity Bureau that the Yosemite Transportation Company has adequate facilities for

local transportation, but some means must be provided to pay the expenses of this transportation during the State meeting. The following methods were suggested: Shall the "street car" fare be a charge to all persons or only to those who do not have badges, or shall the Society in some other way arrange for these expenses, so that all persons may ride as they please without charge? After discussion and upon motion, it was

RESOLVED, That individuals riding shall pay their own fares.

Improved Service by State Society in the Problem of Industrial Medicine—All members of the Society realize the difficulties connected with the work under the Industrial Accident law; all members realize the necessity for the State Society's taking some responsibility toward great efficiency and harmony in the carrying out of this law. It is realized that the present finances and office force of the State Society will not permit of such necessary expansion. After due consideration, on motion regularly moved and seconded, it was

RESOLVED, That the secretary be empowered to employ additional help along the lines suggested by the attorney and himself, so that this industrial accident work may be properly co-ordinated with the other work of the Society.

Question of Responsibility for Section Programs—The secretary raised the question as to who is responsible for section programs. It was stated that in the opinion of the State Program Committee general programs should be filled by invitation from the Program Committee, and section officers should be, as far as possible, responsible for their own section programs, the State Program Committee assigning to each section the number and length of time of periods and the place of meeting of each section. Upon motion it was

RESOLVED, That, except for the fixing of the number, time, places and duration of section meetings, which is the duty of the General Program Committee, the responsibility for section programs is in the hands of section officers, and that the details of section programs are only supervisory as far as the secretary is concerned.

Membership in Local and State Societies as to Licentiate Requirements of the State—The constitution and by-laws as they now stand provide that only doctors of medicine from acceptable medical schools, who are licensed to practice medicine and surgery in the State of California, are eligible for active membership in county and State medical societies. This works a definite hardship in certain specific instances of highly trained men, usually engaged full time in some of the non-clinical branches of medicine, the detriment being equally shared by the Society. Because of the inadvisability of suggesting changes to the Medical Practice Act, it is recommended that the Council introduce at the next House of Delegates the following resolution, as an amendment to Article VII, Section 5, of the By-Laws:

RESOLVED, That the Council of the State Society be authorized to make exception to the existing State license requirement for active membership in local and State societies in specific instances and under such conditions as seem to them sufficient.

Rules Regarding Papers and Discussions at the State Meeting—It was voted by the Publicity Bureau that the following rules be submitted to the Council, with the recommendation Do Pass:

1. The maximum time that may be consumed by any paper is fifteen minutes, provided that not to exceed ten minutes latitude may be allowed invited guests at the discretion of the presiding chairman.

2. Motions from the floor to extend the time of an author may not be entertained by the presiding officer.

3. The maximum time permitted any individual discussant on any paper is four minutes. This also applies to the author in closing his discussion. No discussant may speak more than once upon the same subject.

4. A copy of each and every paper presented at the State meeting must be in the hands of the chairman or secretary of the section or in the hands of the general secretary before the paper is presented.

5. No paper will be accepted by the general program committee nor by a section program committee unless accompanied by a synopsis of not to exceed one hundred words.

6. Papers shall not be "read by title."

7. No member may present more than one paper at any one State meeting, provided that members may present additional papers before sections on technical specialties; and provided further, that a member may be a collaborator on more than one paper, if these papers are presented by different authors.

8. Failure on the part of an author to present a paper precludes acceptance of future papers from such author for a period of two years, unless the author explains to the satisfaction of the Publicity Bureau his inability to fulfil his obligation.

RESOLVED, by the Council, That the recommendation of the Publicity Bureau be approved.

Auditor's Reports and Financial Statement for the year 1921—The secretary and the attorney presented the auditor's report for the State Society and for the Indemnity Defense Fund and the Financial Statement of the office for the year 1921: Upon motion, it was,

RESOLVED, That these reports should be accepted and placed on file.

Cost of Hospital Care—Clipping bureaus show that cheap costs of operating a hospital and otherwise caring for the sick are still items of sufficient interest to call for prominent headlines. The clipping bureaus show many reports of hospitals that take great pride in caring for their sick people at from 75 cents to $1.50 a day. Any person, even the least bit familiar with the facts, or even the facts of what it costs well people to live, can appreciate something of the care that patients get in institutions of this kind.

Annual Meeting
State Society
May 15 to 18, 1922
Yosemite Valley

Make Your Reservations
NOW

COUNTY SOCIETIES

Alameda County Medical Society (reported by C. L. McVey, secretary)—On the evening of February 15, 1922, the annual banquet of the association was held at the Hotel Oakland, with one hundred members present. Dr. George W. Crile was the speaker of the evening. His subject was "Special Points in Abdominal Surgery," and talk was illustrated with lantern slides.

The meeting was held on February 20, 1922, at the Public Health Center, with Dr. George Rothganger in charge of the program.

Dr. Reinle read a paper upon "Kidney Infection." He emphasized the neeessity of complete Urologieal examination in cases where urinary findings repeatedly show the presence of pus. He also brought out a new classification which described more particularly the kidney pathology with which the Urologist has to deal. The paper was discussed by Drs. A. M. Meads, E. Spence Depuy, and W. A. Clark.

Dr. Herbert Gunn of San Francisco talked on Amoebiasis. He stated that Amoebic Dysentery was a misnomer and that the disease should be called by its proper name, Amoebiasis. He discountenanced all drugs except Emetine Hydrochloride Bismuth-iodide and Neo Salvarsan. The paper was discussed by Drs. C. L. McVey and Stewart Irwin.

Dr. P. K. Gilman read a paper on the surgical treatment of Amoebiasis, emphasizing the necessity for surgery of the appendix and gall bladder, in cases which were not cured by three attempts in medical treatment. He discussed the surgical drainage of the liver. He discountenanced the use of irrigation. The paper was discussed by Dr. L. P. Adams and W. A. Clark.

Dr. Palamountain spoke of the unemployment in the East Bay district and the presence of the influenza epidemic now active, and suggested that the society take some steps towards the betterment of the condition. The matter was referred to the committee of Clinic Relations and Public Health.

Fresno County Medical Society (reported by Thomas F. Madden, secretary)—The regular meeting of the society was held at the Commercial Club on March 7, with the following present: G. W. Walker, president, Robbins, Miller, J. R. Walker, Tupper, McConnell, Tillman, Kjaerbye, Couey, Schottstaedt, Divanovich, Tobin, Willson, Hare, Schiro, Stein, Collins, Cowan, Peterson, Cross, Steinwand, Doyle, Craycroft, Pettis, Montgomery, Sheldon, Staniford, Trowbridge, Madden. The paper of the evening was read by William Fitch Cheney of San Francisco on "Diseases of the Gall Bladder." The paper gave the author's classification of the diseases and went extensively into the modern diagnostic methods. Dr. Cheney was instructing again many of his old pupils and it was indeed a great pleasure to hear him. The discussion was opened by Dr. McConnell and he was followed by Tupper, Cross, Collins and Cowan.

On Tuesday, February 21, W. E. R. Schottstaedt of the Fresno City Health Board made an address before the local Lions' Club on "Problems of the Board of Health." His subject was well handled, and gave the layman an idea of what was being done by the board.

Kern County Medical Association (reported by Wm. H. Moore, Editor and Reporter)—At the December meeting of the society the following officers were elected for 1922: President, Joseph K. Smith; vice-president, Geo. C. Sabichi; secretary and treasurer, P. J. Cuneo; censor, Edward S. Fogg; 1922 delegate, F. J. Gundry; alternate, Francis Hamlin; editor and reporter, Wm. H. Moore.

A public health committee was appointed and consisted of Drs. Hamlin, Sabichi and Moore.

Frank J. Gundry presented a paper upon "Renal and Urethral Lithiasis," which was discussed by Moore and Smith.

At the meeting of the society on February 24, at the Kern County Hospital, Keeth S. McKee was elected to membership.

Wm. H. Moore presented a paper upon "Asthma." The different theories were discussed and the reasons given why we believe asthma an anaphylactic phenomenon. The experimental artificial sensitization in animals was reviewed. In man, sensitization is inherited as a dominant factor and follows Mendelian laws. Asthmatics are of two types, sensitized and non-sensitized. The treatment for non-sensitized types is the treatment of the bronchitis and cardio-renal conditions, with possible use of autogenous vaccines.

The sensitized types are four. First—Inspired, represented by pollens, dust, and hair from animals; second—ingested, shown by the egg and milk protein sensitization in babies and food sensitization in adults; third—bacterial, represented by any chronic infectious processes giving rise to bacterial absorption as an antigen; fourth—local pathological conditions allowing absorption, as shown by the results following clearing up of chronic sinusitis, and other nasal conditions.

Authorities disagree on the relation of asthma and tuberculosis. Treatment is symptomatic during the paroxysm, and after treatment depends upon the causative factor. Certainly all possible pathological conditions allowing absorption should be removed. Then by the cutaneous reaction we determine the protein causing the anaphylactic shock. Care must be taken that patient has not been taking K. I., or the traumatic and non-specific reaction cannot be told from the true specific skin reaction.

If the causative protein is inspired, as in pollens and danders, we desensitize or render the patient refractory by repeated injeetions of diluted solutions of proteins, usually starting with 1 to 1,000,000 dilution. If ingested, we eliminate the food from the diet. Baeterial, we use vaccine of the causative bacteria. Many excellent results have been obtained with autogenous vaceines.

Imperial County Medical Society (reported by Frances P. Elliott, secretary)—The regular monthly meeting of the society was held at the Barbara Worth Hotel, El Centro, February 22, with twenty members present. A. Stanley Granger of Los Angeles gave a very interesting paper on "The Interpretation of Some of the Newer Diagnostic Methods and their Relation to Treatment." The members met at dinner preceding the business meeting.

Marin County Medical Society (reported by Chester A. DeLancey, secretary)—Due to the large number of influenza cases in Marin County, the regular meeting of the society was postponed, as all of the doctors have been kept busy night and day with these cases. There has also been a small epidemic of German measles, some of whose prodomal symptoms are similar to those of influenza.

Placer County Medical Society (reported by R. A. Peers, secretary)—A meeting was held at Auburn on the evening of March 11. Robert E. Eveleth of Roseville and Sidney Talbot of Nevada City were elected to membership. The program for the evening was as follows: "An Outbreak of Epidemic Jaundice in Nevada City, California," by A. H. Tickell, in which he reported twenty-two cases of this disease occurring in his practice during the past few months. While there may have been other cases in the State, these are the first cases to be reported in California. Richard W. Harvey, assistant professor of neurology in the University of California, gave an address on "Headaches"; and M. S. Woolf, instructor in surgery of the University of California, gave an address on "The Treatment of Varicose Ulcers." The secretary read a communication from the State Society in reference to the Indemnity Defense Fund and urged all members who had not already taken advantage of this fund to do so at once.

San Benito County Medical Society—The society met March 8, 1922, at a round-table conference with W. E. Musgrave, the State secretary, and F. H. Paterson, councilor for the fifth district. Officers for the ensuing year were elected as follows:

Lenard C. Hull, president; Richard W. O'Bannon, vice-president; Chester W. Merrill, secretary-treasurer; Emma E. McKay, delegate to the State meeting and Joseph M. O'Donnell, alternate.

San Bernardino County Medical Society (reported by E. J. Eytinge, secretary)—The society met on March 7, with twenty members and five guests present and fifty-one absent. Harold Hill, M. D. of San Francisco addressed the meeting on "Recent Developments in Influenza," drawing some interesting comparisons between the epidemics of different years and describing the types of secondary infection which are likely to follow, especially the 1918 epidemic. Other papers were given by T. A. Card of Riverside on "Conduct of Second Stage of Labor," and W. Clifford McKee of Los Angeles on "The Management of the Third Stage of Labor, together with Changes in the Haemoglobin During the Puerperium." Discussion on these papers was opened by E. W. Burke.

San Francisco County Medical Society (reported by LeRoy H. Briggs, secretary)—The general meeting was held on February 14 and was devoted to Newer Methods in the Treatment of Tuberculosis, with papers by L. S. Mace on Pneumothorax in the Treatment of Pulmonary Tuberculosis; Leo Eloesser on Operative Compression of the Lungs in Pulmonary Tuberculosis, and Esther Rosencrantz on the Rollier Treatment in Tuberculosis (Heliotherapy). Dr. Rosencrantz said in part as follows:

"The Rollier method was introduced into the tuberculosis wards of the University of California service of the San Francisco Hospital and applied to both surgical and pulmonary cases.

Rollier established his first sanatorium in 1903 at Leysin, Switzerland, a mountain village 4500 feet above sea-level. Because of the purity and dryness of the atmosphere, the caloric and luminous radiation of the sun suffers very little loss. In midwinter with deep snow on the ground the temperature often reaches 95 degrees or higher.

The treatment consists in exposing the body of the patient to the rays of the sun. This exposure is gradual, beginning with the feet alone for five minutes, repeating this three times during the day. Steadily this is increased, until the entire surface of the body is exposed from early morn until sundown. It is the pigmentation resulting from exposure that is the essential element in the cure.

Rollier's method of heliotherapy was illustrated by stereoptican views showing patients before, during and after the treatment, with the restored function of the involved joints. The analysis of the 1129 cases treated in the ten years, 1903-1913, showed 951 discharged as cured and 112 as improved, 41 unimproved, and 31 deaths. In all there were only 12 relapses, and only upon ten had he operated.

The results are striking when one considers that the majority of patients had open tuberculosis with long-standing suppurative lesions, marked cachexia and amyloid disease, and were sent to him as the last hope.

There were five patients shown from the San Francisco Hospital who had received heliotherapy for many months. All were pulmonary cases; three had surgical complications as well. All showed absence of fever, marked increase in weight, the sputum negative for tubercle bacilli or absent altogether where it was positive upon entrance to the hospital. Of the surgical lesions the good results were most convincing of the efficacy of the treatment, even at sea-level. Heliotherapy is certainly a valuable adjunct in the cure of tuberculosis.

The Committee on Medicine met February 7. The program was as follows: "Bearing of Organic Disease in Childhood on Future Mental Derangement," by E. C. Fleischner; "Mental Case as Medical Case," by J. Wilson Shiels; "The Workings of the Insanity Commission and the Detention Hospital," by C. D. McGettigan. The following resolution was passed:

Resolved, That the San Francisco County Medical Society be memorialized to the following effect: That it is the sense of this, the Medical Committee of the County Medical Society, that a committee on psychopathic hospital be appointed by the president of the society; this committee to be a permanent one and to have for its object the furtherance of any measures that it may think proper toward the establishment of a psychopathic hospital in San Francisco.

On February 21 the Committee on Surgery met, with the following program: Principles Involving Fractures with Special Reference to Etiology and Treatment (illustrated by lantern slides) by Emmet Rixford.

The Committee on Eye, Ear, Nose and Throat met on February 28. This was a clinical meeting at the Eye, Ear, Nose and Throat Clinic of Stanford University Hospital. Demonstration of cases and equipment was made by the hospital staff.

San Francisco County Society—There are 1320 licensed physicians in the city of San Francisco. There are 738 members in the County Medical Society. The society wants better physicians and better medicine. The society wants every good medical man an active member. Individual effort is essential in the building of a good society. You believe in your profession, your society, and in organization for study. Will you secure one new member before the first of March? Tear off the appended application blank. Use it today. Get the applicant's signature. Have a friend endorse him. Sign it yourself. Drop it in the mail box. Do this for the good of the society. That you should bring one new member is not too much to request. San Francisco County Medical Society. LeRoy H. Briggs, secretary. Saxton Pope, president.

Sonoma County (reported by N. Juell, secretary)—A meeting was held March 16 at the office of J. H. Shaw, Santa Rosa, with twelve members present and twenty absent, and there were three guests. Dr. Tom Kelley, late co-worker of Dr. Martin Fisher of the University of Cincinnati, presented a paper on "Local Infections and Their Relation to Nephritis and Diabetes," which was very instructive and appreciated by all. Dr. Shaw gave a report of the meeting of the American College of Surgeons.

Stanislaus County Medical Society (reported by R. E. Maxwell, M. D., secretary)—The January meeting was held on the 20th in connection with a banquet in the Hotel Modesto with the following officers and members present: A. M. Field, M. D., president; J. K. Ransom, M. D., vice-president; R. E. Maxwell, secretary and treasurer; E. F. Reamer, Katherine Hurst, B. F. Surryhno, E. F. Hagedom, J. E. Hosmer, L. L. Mottram, F. R. DeLappe, E. R. McPheeters, J. L. Hennemuth, C. B. Benson and F. W. McKibbon.

Eugene S. Kilgore, M. D. of San Francisco, discussed the subject of "Treatment of Infections of the Heart." He emphasized the importance of correct diagnosis to avoid, on the one hand, the development of cardiac neuroses through overattention to functional murmurs and innocent arrhythmias, and, on the other hand, the missing of active heart infections in the frequently insidious stage of invasion. The latter cases are usually young subjects with poorly defined rheumatic infections and often without characteristic murmurs. In the quiescent stage of endo-, myo-, or pericarditis, focal infections should be eradicated and exercise adjusted (sometimes increased and sometimes diminished) to maintain éompensation and emergency reserve power. Decompensation, if possible, should be treated in its incipiency; and before the usual signs of passive congestion, teleoroentgenograms are valuable for diagnosis. Illustrative lantern slides were shown. The discussion of digitalis and quinidinc included indications, therapeutic effects and dangers. The importance of early diagnosis of syphilitic infections was pointed out. This is rendered difficult by the variety of early symptoms and the late appearance of typical physical signs. Teleoroentgenograms were shown to illustrate their aid in early discovery of disease in the aortic arch. A regime of antiluetic treatment was outlined. A meeting was held at Hotel Modesto, February 17, with the following members present: A. M. Field, J. K. Ransom, R. E. Maxwell, J. E. Hosmer, F. W. McKibbon, J. C. Robertson, F. K. DeLappe, J. W. Reed, E. F. Hagedom, C. H. Griswold, E. R. McPheeters, B. F. Surryhne, R. W. Brace, Clara Finney, J. Cooper, L. Mottram and E. F. Reamer. Max Rothschild, medical director of the California Sanatorium, addressed the society on "Modern Treatment of Tuberculosis." He said in part:

"The above title is an ambitious one and it is the intention of my address to touch only on one phase of the specific and non-specific treatment, the treatment with partial antigens and that with artificial pneumothorax. The important feature in the specific treatment is a correct diagnosis of the prevailing pathology. We have to differentiate between the exudative and the productive type of pulmonary tuberculosis; the exudative type starts in the parenchyma of the lungs and, if it progresses, leads to caseous pneumonic and afterwards to cavity formation. The other type, the productive, begins in the connective tissue and is usually followed by cirrhotic and indurating processes. Each condition appears in its pure type only in the incipiency of the disease. The more the condition progresses, the more the different types merge into each other. For the diagnosis of the correct pathological condition we have to depend upon the history of each case, upon the clinical examination and observation, upon the X-ray examinations and chiefly on the immune-biological tests. In the exudative type the treatment with old tuberculins, or toxic tuberculins, is strictly contraindicated, and in those cases the treatment with the partial antigens of Much-Deycke has given excellent results when properly used. But wherever it is possible to use the treatment with artificial pneumothorax, no matter if the case belongs to the exudative or to the productive type, this treatment is strongly advocated. The chief contraindications with artificial pneumothorax are involvement of both sides and extensive adhesions on the afflicted side."

The address was closed with demonstration of X-ray diapositives of cases treated with the partial antigens and with artificial pneumothorax.

Samuel H. Hurwitz of San Francisco spoke on: Causes and Treatment of Asthma, a consideration of the predisposing causes and some of the known etiological factors, with practical reference to protein hypersensitiveness and infection; Diagnosis of the Type of Asthma (a) The importance of history with special reference to the age of onset, the duration of the attack, the characteristics of the first attack, occupation and the exposure to the emanations of animals, to the pollen of plants, to certain proteins in the food and infection; (b) The technic and interpretation of protein skin tests; (c) The value of sputum cultures. He also discussed The Treatment of Asthma: (a) Symptomatic; the value of such agents as adrenalin, atropin, morphine, benzyol and succinate; (b) Specific treatment with proteins and vaccines.

Santa Clara County (reported by E. P. Cook, secretary)—The February meeting of the Santa Clara County Medical Society was held February 15 at the Hotel Vendome and took the form of an annual banquet. About forty members were present, spent a delightful evening of good fellowship and listened to brief addresses by John H. Graves, president of the State Medical Society, and W. E. Musgrave, secretary of the State Society.

Tehama County Medical Society (reported by F. L. Doane, secretary)—At the meeting of the society held on February 2, the following officers were elected: F. H. Bly, president; J. A. Owen Jr., vice-president; F. L. Doane, secretary-treasurer.

The Health Officer—"Health conservation is a long step from the ordinary concept of a health officer's duties—i. e., water supply, milk supply, nuisances abated and communicable diseases controlled.

"Where any attempt to meet even this outlay of duties is made a laboratory service, both bacteriological and chemical, must be available. And yet, in the first demands on a health officer, child conservation comes to the front. Most adults take boiled milk—hence milk as a health menace covers infancy and childhood.

"Gross dairy inspection means some advance over a standard of 'visible dirt,' but nothing gives a line on the real techique of milking and handling of milk in any way commensurate with bacterial studies on a milk supply.

"A pasteurizing law which does not connect up with a laboratory control of the efficiency of pasteurization is not a contribution to public health." (Adelaide Brown, M. D., in the Bulletin of the California State Board of Health.)

MISCELLANEOUS

Another Examination for Chiropractors — The Board of Medical Examiners has announced from Sacramento that special examination for chiropractors, sanipractors and other drugless practitioners will be held in Los Angeles on April 11, 1922, open to all applicants who can fulfil the requirements of the law, i. e., (1) A California high school education or its equivalent; (2) Two thousand hours professional education completed in sixty-four weeks (just one-half the education required of a medical graduate); (3) A diploma from a legally chartered school teaching the above course; (4) Certificate of good moral character.

The subjects of examination are elementary as specified in the law governing the practice of the healing art in this State.

Chiropractors, sanipractors, as well as other drugless practitioners, who can fulfil the requirements and who are inclined to comply with the law, are again offered an opportunity to co-operate with the Board of Medical Examiners in its purpose to segregate the qualified chiropractors as well as other drugless practitioners, from the unqualified now engaged in waging a campaign of misrepresentation against those who evidence an honest intent to obey the law.

Subsequent to this special meeting announced for April 11, a regular meeting of the board will be held in Native Sons' Hall, San Francisco, June 26 to 29, 1922, when examination will again be offered gratified applicants.

The Newer Medicinal Chemicals — Dr. Alfred S. Burdick, president of The Abbott Laboratories, Chicago, in a recent address emphasized the rapid growth of American chemistry through co-operation of all research agencies in this country.

Concrete examples of American achievements in synthetic chemistry were recited, and a plea made for the support of the medical and pharmaceutical professions to preclude the possibility of our again becoming dependent upon foreign sources for chemical supplies. The history of arsphenamine, barbital, cinchophen, neocinchophen, chlorazene, procaine, the benzyl esters and other synthetic medicinal chemicals was outlined. Announcement was also made of a number of new chemical bodies recently developed, and others on which research work was now being done by The Rockefeller Foundation, various universities, the American Medical Association and certain other laboratories.

In conclusion, Dr. Burdick urged both physicians and pharmacists to prescribe and dispense medicinal chemicals by the newer American names, rather than to perpetuate the pre-war dominance of foreign synthetics. This position was supported by the Council on Pharmacy and Chemistry of the American Medical Association, in whose laboratories American medicinal products have been analyzed and found to be equal and in some cases superior to foreign-made products.

Class Reunion—The class of 1912, the last class to graduate from Cooper Medical College, now Medical Department Stanford University, had a very enjoyable dinner and theater party on February 18th, to celebrate the tenth anniversary of the graduation.

At the dinner plans were formulated for a class reunion at Yosemite Valley in May, at the time of the Annual Meeting of the California State Medical Society.

Letters and telegrams were read from H. D. Barnard, Geo. C. H. Franklin, Allen D. Powers, C. E. Stagner, Geo. J. Hall, S. P. Strange, and E. J. Casper, who through illness or other unpreventable occurrences were unable to attend.

Those who attended were: H. O. Claland, W. M. Malone, F. W. Kroll, J. R. Dillon, R. H. Parkinson, J. H. McClelland, V. V. Hardeman, T. U. Sigwert, A. E. Schmidt, from San Francisco; W. A. Beattie from Sacramento, L. L. Stanley from San Quentin, R. E. Allen and Ream Leachman from Vallejo, N. T. McArthur from Napa, T. S. Long from Cambria, S. W. Dowling from Santa Cruz, and N. T. McNiel from Stockton.

California Association of Physiotherapists (reported by Hazel E. Furscott, president)—A meeting of the active members of the California Association of Physiotherapists was held March 8, and instead of the usual program plans were discussed for a constructive program which would add to the progress of physiotherapy and include all members in its execution. It was decided to take up the following problems:

1. A survey of physiotherapy schools in the United States, Canada, and Europe;
2. Compilation of a physiotherapy bibliography;
3. Survey of physiotherapy in the State of California.

The machinery to carry out this plan will be by committees which will include all active members of the association. In this way, it is hoped to obtain valuable information as well as to stimulate interest of every member by having them definitely contribute to their association.

Remedies for Certain Defects in Medical Organization and Service—(Monthly Bulletin Department of Health, New York City, December, 1921.) Lewis I. Harris, M. D., director of the Bureau of Medical Diseases of New York City, in the article in question has discussed in a most able manner a number of most important problems confronting the medical profession. Any physician interested in the welfare of his profession and interested in better medicine for all the people should by all means read this article. There are statements in the article to which most physicians will not subscribe, but these are few and are lost sight of in the broad, constructive program that Dr. Harris has outlined. Persons desiring to read this article can no doubt get it by addressing the Department of Health, New York City, and making request for a copy.

New Preparations Accepted by the Council on Pharmacy and Chemistry—During the month of February the Council accepted the following articles:

Persson Laboratories:
- Bacillus Coli Antigen (No. 50)—Persson.
- Furunculosis Vaccine Mixed (No. 37)—Persson.
- Gonococcus Antigen (No. 47)—Persson.
- Staphylococcus Aureus Antigen (No. 49)—Persson.
- Streptococcus Antigen (No. 48)—Persson.
- Pneumonia Vaccine (No. 36)—Persson.

Powers-Weightman-Rosengarten Co.:
- Novarsenobenzol—Billon.

G. H. Sherman:
- Whooping Cough Vaccine—Sherman.
- Mixed Typhoid Vaccine—Sherman.
- Acne Staphylococcus Vaccine—Sherman.
- Alypin.

Winthrop Chemical Co.:

Shall We Be Wrecked by Realism?—There is a useful lesson in this little article by Thomas L. Mossan in the World's Work for February, page 435.

BOOKS RECEIVED

American Illustrated Medical Dictionary (Dorland). A new and complete dictionary of terms used in medicine, surgery, dentistry, pharmacy, chemistry, veterinary science, nursing, biology, and kindred branches; with new and elaborate tables. Eleventh edition, revised and enlarged. Edited by W. A. Newman Dorland, M. D. Large octavo of 1229 pages with 338 illustrations, 141 in colors. Containing over 1500 new terms. Philadelphia and London: W. B. Saunders Company, 1921. Flexible leather, $7 net; thumb index, $8 net.

Solutions (in ten lessons). A manual for use in training schools for nurses. By Elsie M. Smith, R. N. Second revised edition. St. Louis: C. V. Mosby Company, 1921. Price, $1.

Epidemiology and Public Health. A text and reference book for physicians, medical students and health workers. In three volumes. By Victor C. Vaughn, M. D., LL. D. Assisted by Henry F. Vaughn, M. S., Ph. D., and George T. Palmer, M. S., Ph. D. Volume 1, Respiratory Infections. St. Louis: C. V. Mosby Company, 1922. Price, $9.

Clinical Diagnosis. A textbook of clinical microscopy and clinical chemistry for medical students, laboratory workers, and practitioners of medicine. By Charles Phillips Emerson, A. B., M. D. 156 illustrations. Fifth edition entirely rewritten and reset. Philadelphia and London: J. B. Lippincott Company, 1921.

Submucous Resection of the Nasal Septum. By W. Meddaugh Dunning, M. D., consulting otologist, Fordham Hospital, N. Y. C. New York: Surgery Publishing Company, 1921.

Lessons on Tuberculosis and Consumption for the household showing how to prevent tuberculosis, how to recognize its first symptoms, how to win back health. By Charles E. Atkinson, M. D. Illustrated. New York and London: Funk and Wagnalls Company, 1922.

Physicians' Responsibility Under the Industrial Accident Law—The Industrial Accident Commission in a recent circular letter has again called the attention of physicians to Section 53 of the Industrial Accident Law of California. The section provides that every physician or surgeon who attends an employe for injury arising out of or in the course of the employment shall make a report direct to the Commission. This report is due from every physician or surgeon who attends an injured employe, regardless of the class of employment, regardless of whether the employer carries insurance or not, regardless of the fact that the practitioner may also be in the employ of the same employer, and regardless of any and all insurance carriers. If the employer is insured, a copy of the report should be sent to the insurance carrier, as it is of equal importance that they also be notified promptly.

A QUICK AND EASY METHOD FOR THE REMOVAL OF PLASTER CASTS

The removal of heavy plaster casts is practically always a tedious task for both surgeon and patient the one wearing out his hands with the exertion of cutting and the other his nervous system with the expectation of being cut. At least this has been my observation, and is especially true when 5 to 10 per cent of cement is added to the plaster to increase its strength, as is done in the hospitals of this community.

This cement mixture makes a most satisfactory cast and one that will stand a great deal of rough handling and strain, but it is also very resistant to incision.

A given amount of plaster seems to offer about the same resistance to saws, knives, scissors and all other types of instruments, whether or not the plaster is moistened with acetic acid or any of the other substances which have been suggested as solvents. When solvents are used in sufficient amounts to be of assistance, time is consumed in waiting, and the cast is usually destroyed for further use.

These difficulties have often made me wish that my casts belonged to someone else, when it came to removing them, until I learned that the cloth is easily cut after the plaster has been powdered. This is accomplished by striking quick light blows on the cast along the desired line of incision with a small tack hammer or similar instrument, by which the consistency of the plaster is broken. When this is done, the remaining soft bandage may be easily cut with a knife or scissors.

It is better to break the line over soft tissues, when possible, than over areas where bones are prominent; however, this is not necessary, and the use of reasonable care does not bruise or abraid even in the latter areas. In many instances the area of the cast which is being struck can be completely lifted from the underlying tissues by exerting pressure on the opposite side of the cast.

Plaster does not fracture beyond the areas of impact, and, therefore, does not depress into the underlying tissues. This, however, makes it necessary to overlap the blows in order to completely break the plaster in the line.

Casts which are desired for further use are not destroyed by this method to any greater extent than when removed by simple cutting.

CLARENCE E. REES, M. D.
427 First National Bank Bldg., San Diego, Calif.

NATIONAL BOARD OF MEDICAL EXAMINERS

The dates for the next two examinations of the National Board of Medical Examiners are as follows:

Part I and II, June 19, 20, 21, 22 and 23, 1922.

Part I and II, September 25, 26, 27, 28 and 29, 1922.

Applications for the June examination should be in the Secretary's Office not later than May 15, and for the September examination not later than June 1. Application blanks and circulars of information may be had by writing to the Secretary, Dr. J. S. Rodman, 1310 Medical Arts Building, Philadelphia, Pa.

Paternalism, the Most Subtle and Sinister Enemy of Popular Government—On November 18, 1921, Congressman Frank L. Greene of Vermont delivered an address before the House of Representatives that ought to be read by every physician and every other thinking citizen of this commonwealth. Mr. Greene's subject happened to be Senate Bill 1039, but his remarks constitute a most thoughtful and sane protest against the everincreasing tide that is swinging toward paternalism and socialism in our government.

NEW MEMBERS

Charles A. James, Fresno; Paul S. Barret, Fresno; H. J. Ring, Ferndale; Caroline Rosenberg Maule, San Francisco; Wm. A. Sampson, San Francisco; Wm. H. Bingaman, Gonzales; James F. Finnegan, Vallejo; R. E. Allen, Vallejo; Frances P. Elliott, El Centro; Ora B. Dunham, Brawley; Henry B. Graeser, Holtville; Franklin H. Carter, San Diego; Thomas M. MacLachlan, San Diego; Frank J. Ratty, San Diego; Chester O. Tanner, San Diego; Arthur Wegeforth, San Diego; Manuel L. Azevedo, Sacramento; H. H. Beck, Yreka; Alverda E. Reische, Oakland; Alonzo D. Snyder, Corning; Frank E. McCann, Corning; L. E. Chapman, Gerber; Horace A. Hall, Arlington; John Jacob Kacher, Palm Springs; Wm. M. Miller, Riverside; Harry W. Smiley, Indio; Victor d'Ercole, San Francisco; W. E. Carter, Los Angeles; Thos. J. Crowley, San Francisco; L. H. Watkins, Los Angeles; Philip B. Newcomb, Los Angeles; Margaret M. York, Glendale; Joseph S. Cipes, Los Angeles; Harry J. Powers, Los Angeles; Milan J. Hart, Pasadena; Carl E. Conn, Los Angeles; Geo. B. Bormann, Los Angeles; Gavin S. Herbert, Los Angeles; Sterling N. Pierce, Los Angeles; Harvey D. Thornburg, Los Angeles; Edwin R. Butterfield, Los Angeles; Thos. McHugh, Los Angeles; Gilbert R. Owen, Los Angeles; H. N. Mayo, Los Angeles; W. B. Mayo, Los Angeles; Charles E. B. Flagg, Pasadena; Louise D. Wagner, Pasadena; Edward C. Love, Danville; Josephine E. Platt, Pasadena; Walter P. Bliss, Pasadena; De Witt C. Bryant, Los Angeles; Robert H. Kennicott, Los Angeles; Hersel E. Butka, Los Angeles; Frank W. Kidder, Los Angeles; John D. Gillis, Los Angeles; James T. Papas, Los Angeles; Ralph A. Woods, Los Angeles; Ernest I. Mulder, Los Angeles; F. H. Brandt, Los Angeles; Hugo R. Chaloupa, Los Angeles; Floyd Thurber, Los Angeles; Ben E. Grant, Los Angeles; Harry J. Schott, Los Angeles; Hubert G. Wilbur, Long Beach; C. M. Sneden, Long Beach; H. M. Griffith, Pasadena; Geo. S. Martin, Susanville; H. J. Movius, Los Angeles; Robert H. Eveleth, Roseville; Sidney Talbot, Nevada City; S. S. Goldberg, Los Angeles; Henry S. Whisman, Agnew; Donald G. Davey, San Jose; Charles L. Janne, San Jose; Ralph M. Smith, Calexico.

Transferred—Vard H. Hulen from Alameda County to San Francisco County; A. Gottlieb from San Francisco County to Los Angeles County; V. G. Alderson from San Bernardino County to Los Angeles County.

Resigned—A. W. Hitt, Los Angeles; T. R. Pratt, Los Angeles.

SOCIALIZED MEDICINE IN ENGLAND

The public press of England is furnishing some illuminating information about the workings of their so-called health insurance laws and particularly as to the sorry plight of both the public and profession in a country where State medicine of the government variety is so generally in force. We read that the Medical Practitioners' Union, after passing a resolution fixing an irreducible minimum fee at 13s. 6d., were forced by arbitration to accept 11s. as a "minimum wage." It seems that the government is about to try to force a still further reduction on the ground that other union wages are being reduced. The public, of course, is objecting to the amount of the capitation tax, and everyone is just about as unhappy as they might be expected to be under the state administration of a great personal service profession. Not so long ago, the profession of England gave to the world constantly of its progress in the medical sciences. Fakers of various sorts and walking delegates seem to have most of the limelight now. Perhaps the most significant phase of the discussion is the general and drastic criticism of the powerful and expensive machine that has been built up for the administration of their intricate political law for the care of the sick. We are told that there is another side to the picture, but we are also told that this other side is sponsored only by those who are interested parts of the machine.

Shriners' Hospital for Crippled Children—The Board of Supervisors of the City and County of San Francisco on January 9 finally passed a resolution authorizing the Board of Trustees of the Shriners' hospital to maintain and operate a hospital for crippled children in the block bounded by Nineteenth and Twentieth avenues, Lawton and Moraga streets.

Napa State Hospital—The State Hospital at Napa is shortly to have repairs and extensions involving the expenditure of about $85,000 most of which is for a new home for employes.

DEATHS

Wilcox, Glover B. Died in San Francisco, March 13, 1922. Was a graduate of the College of Physicians and Surgeons, Los Angeles, Calif., 1908. Licensed, 1911. Was a member of the Medical Society, State of California.

Corpé, S. L. Was killed in El Monte, Calif., when the car he was driving stalled on railroad track. Was a graduate of Hahnemann Medical College, Ill., 1894. Licensed in California, 1911.

Shepard, Gilbert. Died in Santa Cruz, Calif., March 7, 1922. Was a graduate of Hahnemann Medical College, Chicago, Ill., 1870. Licensed in California, 1896.

Peebles, J. M. Died in Los Angeles, February 16, 1922. Was a graduate of Philadelphia Medical and Surgical, 1876. Licensed in California, 1894.

Dale, H. M. Died in Los Angeles, February 27, 1922. Was a graduate of the Medical Department, University of Iowa, 1894. Licensed in California, 1901. Was a member of the Medical Society, State of California.

Rowell, George Ball. Died in San Bernardino, January 11, 1922. Was a graduate of McGill University, 1886. Licensed in California, 1888. Was 62 years of age and born in Canada.

Welch, Henry Seely. Died recently in San Francisco. Was formerly a surgeon in Second Regiment of Infantry, National Guard. Age 73. A graduate of Bellevue Hospital, Medical College of New York City, 1872. Licensed in California, 1876.

Macauley, Henry A. Died in Midway Island, November 28, 1921. Was a graduate of the University of New York, 1887. Licensed in California, 1910.

Toland, Marcellus R. Died in Los Angeles, February 5, 1922. Was a graduate of Southern Medical College, Atlanta, Georgia, 1883. Licensed in California, 1887.

Etcheverry, M. H. Died in San Francisco, March 1, 1922. Age 43. Was a graduate of the College of Physicians & Surgeons, San Francisco, 1902. Was a member of the Medical Society, State of California.

California State Journal of Medicine

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Editor and Secretary - - - - - - - - - W. E. MUSGRAVE, M. D.
Managing Editor - - - - - - - - - CELESTINE J. SULLIVAN
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ORIGINAL ARTICLES

RESPONSIBILITY FOR STATEMENTS AND CONCLUSIONS IN ORIGINAL ARTICLES

The author of an article appearing in the JOURNAL is entirely responsible for all statements and conclusions. These may or may not be in harmony with the views of the editorial staff. Furthermore, authors are largely responsible for the language and method of presenting their subjects. All manuscripts will be carefully read, but editorial privileges will be exercised only to a very limited extent. It is believed that the manner of presentation of any subject by any author determines to no small degree the value of his conclusions. Therefore, both the author and the reader, in our opinion, are entitled to have the subject as presented by the author as little disturbed as possible by the editors. However, the right to reduce or reject any article is always reserved.

A STATEMENT OF THE PROBLEMS OF INDUSTRIAL MEDICINE IN CALIFORNIA

By GEORGE W. GOODALE, M. D., San Francisco

There are two distinct factors in industrial medicine which threaten the welfare of the medical profession and the efficiency of this service to the public:

First—The existing dissatisfaction of the medical profession with the present status of industrial medical practice, with the possibility of internal strife arising disastrous to our State organization.

Second—The existing economic warfare of insuring companies threatening the almost inevitable sacrifice of the medical profession on the altar of business economy.

The existing dissatisfaction of the medical profession regarding the present status of industrial medicine is due to various causes:

(a) The average physician cannot understand why he cannot treat a patient who is one of his clientele for industrial injuries, and he cannot understand why the ordinary rules of professional etiquette for private practice do not apply to industrial cases. Consequently, he is subject to all the irritation that occurs when one thinks that one's personal rights are being trampled upon unjustifiably. A great deal of this condition exists on account of the ignorance of the average physician regarding the details of the Compensation Law. He has little, if any, knowledge of what constitutes, under the Compensation Law, the rights of the physicians, the patient, the employer and the insurance companies, and, consequently, has no proper standard to guide his own actions.

(b) A great deal of dissatisfaction in the medical profession arises from the experience of physicians who only occasionally handle industrial cases, both at the amount of remuneration received and the treatment accorded them by insurance companies.

They feel that as physicians they must render emergency aid whenever or wherever asked, and feel keenly the injustice of being paid a paltry sum for work that was unsolicited and undesired, and only performed because their duty as a physician required them to act. This condition is largely due to an impractical fee schedule which takes no cognizance of varying classes of physicians or of varying degrees of service.

The dissatisfaction with the treatment received is largely due to the lack of knowledge upon the part of the physicians of what is required by insurance companies in carrying out the detailed administration of the law. The insistence that the physician follow certain set rules of procedure and reporting is often the foundation for misunderstanding between the physician and the insurance company.

(c) The next cause of dissatisfaction is limited to a relatively small portion of the profession. The cause of this is the inability of many surgeons, who desire industrial work, to obtain it. These physicians would like to be put upon the special panels of the companies, and, failing in this, would like to have panels abolished altogether.

In the eight years since the inception of the Compensation Law, the medical work of the companies has settled into definite channels, and physicians seeking this work find it very difficult to change it. The complaints arising from this condition, while undoubtedly from the smallest number, are also undoubtedly the loudest and most persistent.

Let us next consider the economic warfare of insuring companies and in what manner this threatens the welfare of the medical profession. In analyzing any problem, whether it be business, political or medical, and this problem embraces all three, motives and trends are more important than individual statistics.

In the beginning, the importance of the Compensation Law to the medical profession was hardly thought of and certainly not appreciated. At that time the persons vitally interested were employers, employes and lawyers. The enactment of the law was largely the result of revolt fostered by labor unions, and sustained by public opinion, against the old liability law and the very serious wrongs that were inflicted upon injured employes by employers and insurance companies. The motive of these wrongs was an economic one.

The law provided certain penalties against employers, which the employer met by transferring his obligations to an insurance company. The insuring company which survived was one able to quote the lowest rates for insurance. The one

who could administer his business the cheapest could give the lowest rates, and, consequently, got the business. Successful companies retained lawyers on a salary, made collection by plaintiffs as difficult as possible, and paid few claims. This competition crushed the employe, as he was the weakest and least able to protect his rights. The trend at that time was strictly against the laboring man. The motive of the Compensation Law was to save the laboring man and, by numerous safeguards provided in the law, this was accomplished.

The establishment of the Compensation Law was received with varying emotions. The lawyers were disgusted at being deprived of a certain amount of their business. The doctors were divided, some looking upon industrial practice with disfavor, and others ready to give it a fair trial. The insurance companies were disgruntled over the loss of their liability business. However, the attitude of the insurance companies quickly changed as they realized that the field of compensation insurance was much larger than that of liability insurance, and while the percentage of returns was much smaller, the volume more than compensated for its loss.

Shortly after the initiation of the law there was a period chiefly marked by a wild scramble for business. Little attention was paid to service, and most to rates. Irresponsible companies proceeded to cut rates without any thought to ultimate results, and the consequences were that as soon as returns began to come in, losses began to show. One company in particular failed with a great loss to injured employes, and other companies were forced to quit writing compensation insurance. The fight at that time was between what were known as board and non-board companies. The board companies, with few exceptions, held to full rates; the non-board companies wrote at cut rates. To meet this condition of affairs, there was a law passed, called the Minimum Rate Bill, and a board was appointed from insuring companies and State Fund under the direction of the Insurance Commissioner to adjudicate rates and no company was allowed to cut these rates. This, to a large extent, stopped rate cutting. What cutting was done, was done surreptitiously. Not being able to gain business by rate cutting, the companies were forced to appeal for business on the grounds of giving better service.

Now comes the development of another step. The State Compensation Insurance Fund was primarily established to hold in check stock companies so that they would not be able to combine and put through, by concerted action, policies that would be injurious to the best operation of the State Compensation Law. The original intent of the law was not that the State Fund should be a competitor of the companies in the sense of a business competitor, endeavoring to obtain all business possible, but a competitor whose presence in the field would make impossible any injurious practices by stock companies. However, as time progressed, this attitude of the State Fund changed. The common fault of bureaucracy quickly manifested itself. Bureaus, like individuals and corporations, desire to grow and to aggrandize other fields. The State Fund was not content with simply being a check on the companies and became an active competitor.

Insurance companies are allowed by law to pay a certain percentage to brokers for obtaining business for them. The State Fund, not being considered in the beginning as being created as an active competitor, was forbidden to pay any brokerage fees. This, in certain conditions, would be harmful in business getting, but under certain other conditions it works out quite the reverse. Not having to pay brokerage fees, and not having to pay stockholders' dividends, in an economic race the State Fund had a marked advantage. While the law prohibited the State Fund from paying brokerage fees, it did not prohibit the manager of the State Fund from hiring special agents who supplanted the broker in his special province of contact man with the employers. The salary of special agents, needless to say, was much less than commissions to brokers.

Given a large company, turning back large rebates on premiums, it was inevitable that the company able to do this would get a large proportion of the business, and this is exactly what happened to the State Fund. Not being able to meet these conditions brought about the last shift in insurance conditions. Stock companies forced the adoption of what is known as the "Experience Rating Plan." Instead of a minimum rate, any plant whose experience showed that it had operated at certain compensation costs below the minimum rate was allowed a rate based upon its own experience. This, if carried out correctly, would do away with the advantage of the State Fund, and the companies would be able to quote them a rate that would be as attractive in a business sense as the State Fund could give. The whole proposition amounted to each assured's insurance rate being based upon its own experience rather than upon general experience, which is the common rule in determining insurance rates. This puts the cost directly to the owner, the consequence being at the present time that the company which can operate the most economically stands the best chance to get the business.

There are four factors of importance contributing to the expense of admistration of compensation insurance — administration expense, compensation losses, safety engineering, and medical service. Of all these, the medical is the most valuable and the most important.

While, at the beginning of the compensation era, a great deal was said about economics and cheapening of the medical, the real motive which determined the centralization of medical was the need of having the medical business handled in a systematic way. To clear their tables, adjusters were compelled to have physicians who would co-operate.

Another period now arose coincidental with the Minimum Rate Law. This stabilized the business of the stock companies, and their motive then was that of better service. This was reflected in

the medical service, and the physicians or organizations who could give the best service to a large extent dominated the field. This marked the greatest advance in medical service. To obtain the business, it became necessary to give the best of everything: Offices, emergency service, specialists, rehabilitation treatments, X-ray and laboratory work, with the best of clerical and administrative service. This period extended through the boom periods of the war and until the last few months when, with the conflict between the State Fund and the stock companies for business, this has brought about another change. Rebating by the State Fund as a business propaganda, and the Merit Rating System of the stock companies, bids fair to bring about an economic warfare during which the opposing sides will attempt to exploit the services of industrial physicians and surgeons.

To summarize, insurance is now being sold at cost, and whoever reduces the costs gets the business. Administrative expenses are practically stationary and afford little opportunity for saving. Installing of safety apparatus is limited in its field, although it has some bearing. In compensation payments, the injured employe is so protected by the Industrial Accident Commission that little, if any, saving can be made there. The most variable cost, and the place where the most can be done, is the medical, and that is where the axe is bound to fall.

Under the old liability law, the saving was made off the injured employe, and on account of his weakness he was ground between the millstone of economic competition. At the present time it looks as if the medical profession bade fair to take the place of the injured employe in being the grist of the business mill unless in some way it can protect itself. Companies, not necessarily because they desire to, but because they are forced to by competition, will get their medical service as cheaply as possible. Such is the condition that confronts us from the companies' standpoint; on the other hand arises another complication to further embarrass us:

In the beginning of the Compensation Law most physicians took the attitude of sneering at the work and either refusing to do the work or did not endeavor to conform to the necessary requirements, of proper reports. Now a revulsion of feeling has come upon the medical profession.

With the passing of boom times, the medical profession feels the pinch the same as all other lines. Consequently, a great many of them are now very anxious to obtain the work which they at first despised. While at first they had an exaggerated idea of the smallness of the fee, now they have magnified the amounts received by industrial surgeons and are very desirous of participating in this imaginary wealth. The fact that many surgeons are now desirous of obtaining the work makes competition much keener. The economic warfare of the companies under the merit system of rating, and the competition among surgeons for the business, is going to mean, unless wise and constructive measures are taken, very cheap medical service.

Before attempting to prepare any plan, it is well that we take stock of ourselves. The problem before us is one of economic warfare, and might is superior to right when right is unorganized and unable to defend itself. In this field we cannot command respect unless we have the ability to enforce the same. We must admit that as far as looking out after our own interests is concerned, in the administration of the Compensation Law, the medical profession has not been a success.

The cause of our failure lies, first, in the belated recognition of the importance of the Compensation Law to the medical profession. Second, in the establishment of a special fee schedule, open to all with no conditions attached. Third, in the failure to recognize the fact that we are not dealing with patients, but with centralized medical corporations whose patients number all the workmen in the United States and whose field of action is the whole country. Fourth, a lack of centralized authority, with power to act, to represent the interests of the medical profession in the industrial world. Fifth, the lack of a practical plan by means of which such centralized authority can reward or punish recalcitrant companies and members of the profession.

As to the first cause of failure: Fortunately, the profession have at last been aroused to the importance of the Compensation Act and similar laws. I think that they are now willing to give this subject the consideration it deserves and that the best minds, who have the interest of the profession at heart, are prepared to take any action necessary for our preservation. Without this, it would be impossible to accomplish anything, but with full co-operation we should be able to work out a plan that is both feasible and effective.

The second cause of failure was the adoption of an unconditional fee rate schedule. Having given a schedule open to all companies alike, the Medical Society left itself no means of dealing with individual companies. Fortunately, the original schedule has been raised, leaving us a margin that can be used in drawing up a preferential fee schedule, if we so desire.

Third—Industrial medicine deals, economically, not with patients but with corporations. Rules governing physicians in their relations with private patients are not applicable to physicians in their relations with corporations. Complexities in social organization have so arisen that Hippocrates would be forced to rewrite his celebrated epistle if he wished to cover all points necessary for the guidance of our actions. As the United States has today been forced to a new foreign policy, so today the medical profession is forced to add on additional features if it wishes to protect itself and those it serves.

Fourth—Lack of centralized control. Today the State Medical Society is largely governed as a democracy. True, it has a State organization and a State council, but their authority is extremely limited. The ultimate authority of the Society

rests in county units. While this system has proven itself to be very efficient in the past, it breaks down when confronted with the necessity of dealing with centralized organizations that are not only State but National in their scope of action. Only a centralized authority invested with power can defend itself in controversy with insurance corporations. This centralization of power should eventually be National as well as State. Since the present machinery of our Society does not permit such a centralization, it becomes necessary for us to evolve a plan of government that will meet our needs.

Fifth—At the present time we lack a plan of action to meet special needs in the industrial world.

The needs of the present situation require the evolvement of a plan which shall allay dissatisfaction on the part of the general profession, provide a competitive field in industrial medicine open to all physicians of our Society, and protect the profession from being sacrificed in an economic warfare. Evolvement of such a plan is, indeed, very difficult. Many varying factors must be taken into consideration; it must be so safeguarded that in helping one we do not injure another, and at the same time the broad policy of acting in a practical way for the good of the whole profession, and not of the individual, must be followed.

When we deal with individuals, whether companies or doctors, concrete facts and not general theories are what count. Without the support of a majority of the insurance companies, it is futile to plan; without almost united support of the medical profession, any plan is bound to be a failure.

(1228 Flood Building)

THE POPULARIZATION OF MEDICAL KNOWLEDGE

By HENRY I. LEVITON, M. D., Los Angeles

In one of last year's issues of the *Journal of the American Medical Association* there appeared a practical editorial commenting on a thesis by the French physician Georges Bourgeau.

Bourgeau takes for his subject "The Relation of the Public Press to Medical Science." He divides his monograph into two headings. The first deals with the laxity of the French law bearing on the quack and the patent medicine manufacturers. The second deals wtih the unintelligent and unscientific, often distorted, presentation of medical facts in the public press.

My intention is to add to Bourgeau's thesis an appeal for a closer relation between the laity and the medical profession in an attempt to popularize medical knowledge.

In California physicians are confronted with lax and harmful public health laws; are sometimes attacked and insulted in the public press, and they are even accused of preying upon the sick and the dying. Most physicians go about their work without paying any attention to these attacks. In a way, this is the proper manner to act. Silence is golden. But let us not forget that silence is falsely interpreted as an admission of guilt.

Every physician knows that these attacks are wilful propaganda, often based upon ignorance and superstition. Some of it, no doubt, is due to misunderstanding. It is our duty to the public and to ourselves to bridge the chasm incident to this misunderstanding by a bridge of common sense in the form of intelligent dissemination among the people of medical truth by means of the public press.

The day of serecy, the day of the mysterious in medicine, is as much a thing of the past as the proverbial doctor's stovepipe and whiskers. They belong to the rubbish heap. Affectation in dress and personal appearance, the particular mannerisms and the air of the mysterious that characterized the doctor of yesterday, was probably an asset with our grandfathers. With us it is a liability. It savors of the charlatan. Modern medicine is above board. So must modern doctors be. *The science of medicine is our greatest asset. This science we must endeavor to make accessible to the people; thereby increasing the safeguards to the health of the public and destroying the influence of charlatans.* Medicine is daily becoming a science more definite, more concrete. Therefore its honest and frank exposition is a duty we owe to the public as well as to ourselves. Indeed, medical Evangelism is becoming a national necessity. Medical missionaries are needed right here in our United States as much as, perhaps even more than, in China or Turkey. There is here in our land a movement daily growing more vicious in its attacks upon scientific medicine and national health laws. This evil was pointed out in a recent editorial by the CALIFORNIA STATE JOURNAL OF MEDICINE, which says in part: "Various mental healing methods based upon religion and pseudo psychology are on the increase." This is particularly true of some of the so-called scientific branches of the cultists. Much of this sort of "psychology" literature is thoroughly saturated with propaganda of a vicious type, dealing particularly with dreams and sex. After acquiring a flimsy educational veneer their professors begin to style themselves "psychologists" and "mental efficiency experts," and what not. And a constantly increasing number of them are selling a pseudo medical service to the public under one form or another. In fact, a new species of this sort of spellbinder appears with every issue of the Sunday papers, advertising wondrous magic cures by electricity, massage, water and air, both hot and cold—especially hot.

As every scientifically informed man knows, in the "colleges," in the offices of these spellbinders, in fact, even in the courts and on the floor of our State Capitol, they attack the program of scientific medicine as well as its standard of practice. Indeed, they assault the very citadel of science itself. They attack it with all the blind fury the dark ages attacked Bruno and Galileo.

Nor must it be thought that since science is true it needs no other defenses than its own truth. Truth will endure only so long as it has defenders whose arms are strong. Otherwise it may be trampled in the mire as much as the most vicious lie—even more. The history of the past is shock-

ingly fraught with experiences where truth was most barbarously, most cruelly trampled in the dust, while falsehood was enthroned on a pedestal of gold. And, therefore, there is not the slightest doubt that if these magic healers succeed, all the other learned professions—engineering, agriculture, architecture, etc.—will come next. This question thus deserves the critical attention of every man, not as a matter of protecting a particular group who happen to be indispensable to the welfare of the nation and the race; but as a matter of preserving the most ancient and most noble of all the sciences. The quacks are overrunning the country with their most absurdly senseless health doctrines; and we, the educated guardians of the health and life of the nation, ostrich-like hide our heads in our scientific medical journals, allowing the truth about these vital subjects to remain unaccessible to the public.

The scientific facts of recent medical discoveries are daily being distorted and misrepresented by a certain type of public press—to the detriment of the public. One need not be a physician to be stirred to indignation.

Of all people physicians should be the first to insist that all medical truths be made known to the public. If possible, we ought to see that this is done by means of the public press. This agency should serve as the medium through which medical men may impart to the people the true facts of the latest medical discoveries.

In his monograph Bourgeau mentions that even such authoritative newspapers as the Paris Matin handle very carelessly, often even distort almost wilfully, matters pertaining to scientific medicine. Thus what may be termed dangerous handling of some of the most important medical subjects may result in failure on the part of the ailing to seek competent medical advice in time. This in turn results in hopeless protraction of such diseases as syphilis, tuberculosis, and cancer. The patient first tries all the "cures" advertised by the newspaper. When he finally comes to the physician he is in a hopeless condition. Bourgeau cites as an illustration some of the headlines of the Paris Matin on this subject, some of which I beg to reproduce here and request the reader to look for similar ones in his own paper:

"Contagion Has Been Abolished in Scarlet Fever"; "The Transfusion of Blood Is a Dangerous Procedure to Donor"; "Anteriosclerosis Vanquished"; "One-Half of Those Who Are Deaf Are Cured by Radium," etc.

All of us remember the sensationalism of the so-called interstitial gland transplantation. The evils of such medical falsehoods are self-evident to the physician.

The only remedy is the popularization of medicine. It should be expounded by medically trained journalists. This will result in a closer understanding between the laity and the medical profession, and will remove the ancient veil of mystery and secrecy. In the comment referred to above, the *Journal of the A. M. A.* states:

"Bourgeau's criticism of the French press applies with equal weight to the press of the United States. Fortunately, in this country there is at least a beginning of betterment, for a few of the larger and better class papers have recognized the necessity of greater accuracy of this class of reporting and have a trained personnel to cover matters of this sort and insure that the written account may be something more than a fanciful story written by one to whom even the terminology of the subject is an unintelligent jargon."

But to bring about a condition where matters would be at least tolerable physicians must see to it that some of our journalists are trained in the science of medicine and some medical men acquire the art of journalism. This is the only hope we have in popularizing the knowledge of medicine and ridding the world of the pestilential influence of the "healers" who prey upon it in a thousand ways.

(1115 Story Building, Los Angeles.)

POPULAR HEALTH ARTICLES

The League for the Conservation of Public Health is editing and conducting a department for the San Francisco Examiner and the Los Angeles Examiner devoted to popular health articles written by scientific medical men. The combined circulation of these two papers daily is a quarter-million and the Sunday editions are read by more than a half-million people.

The League has requested us to invite all the members of the State Society to send to the Executive Secretary of the League, Butler Building, San Francisco, timely articles, of about 500 words each, expressing in popular terms some concrete facts or phase of scientific medicine. All the various scientific agencies and methods that are used by scientific medical men to promote and protect health, to combat and cure disease, come within the scope of the articles which are being published in the Better Health Service conducted by the League. As a practical method for popularizing medical knowledge this enterprise of the League merits our fullest co-operation.—[Editor's Note]

TREATMENT OF OAK DERMATITIS CAUSED BY RHUS DIVERSILOBA

By HARRY E. ALDERSON, M. D., San Francisco

Since the articles published by Schamberg,[1] Strickler[2] and Alderson,[3] describing the specific treatment of poison ivy and poison oak dermatitis, there have been many inquiries regarding the use of this substance. As most correspondents ask practically the same questions, this article will serve to answer all of them.

The preparation is not a "serum." It is an alcoholic solution of the toxin of the poison oak plant (rhus diversiloba). It is prepared as follows: A given weight of fresh crushed leaves of rhus diversiloba is covered with absolute alcohol, extracted, filtered and precipitated, and the precipitate dried at low temperature. A given weight of the toxin is dissolved in absolute alcohol and sterile water added. An arbitrary standard is set for the weight of the toxin, volume of absolute alcohol and the volume of sterile water. It is hoped to be able to standardize the preparation soon.

A large quantity was made in this way by George Broemmel, B. S., Ph. G., Ph. C., and its toxicity tested on various laboratory animals. It was found that as much as 3 cc. had no toxic effects aside from the alcohol action on guinea pigs.

It is not a "secret proprietary article," but can

be made by any competent chemist who has access to a supply of fresh poison oak (rhus diversiloba) leaves and twigs. It is advisable, however, to try out the newlymade toxin on the guinea pig to determine its toxicity before using any given lot.

We have had no untoward effects. Out of several hundred patients injected only a few have felt faint or nauseated, and in each instance this was due principally to psychological factors. One patient developed hyperesthesia and various other purely nervous symptoms which were due to other causes.

Our greatest success with this substance has been in the treatment of cases of acute dermatitis venenata due to poison oak, but we feel that in many, greatly increased tolerance for the poison has been produced, so that the patients appear to have become immune. As this is not like the immunity produced by bacterial products, it is felt that one should take a course of the toxin every year. This is because tolerance for any chemical poison which is acquired by taking the same in increasing doses gradually wears off (as, for instance, with arsenic, nicotine, morphine, etc.). However, some poison oak patients seem to maintain their tolerance for longer periods than others. This latter observation has been made of those who seem to have "natural immunity." Occasionally those possessing this "natural immunity" lose the same and they at times may show great susceptibility to the effects of the plant. So far no satisfactory explanation of this phenomenon has been found.

It is not claimed that this treatment is invariably successful. We consider, however, that in most cases the results by this method are superior to those that we have seen after any other plan of therapy. The acute symptoms almost invariably subside promptly. Repair of the damaged skin naturally is slower with some individuals than with others. This terminal dry, peeling phase may last several days, but should not be regarded as being part of the *active* poison oak dermatitis.

Method of treatment in active cases.—With very young children we have not attempted to give the injections, but have administered the more dilute solution by mouth, regulating the dosage according to the usual rules applying to therapy in pediatrics. We have given 0.5 cc. of the toxin intragluteally to children over six years of age with good effect. With older patients from 0.5 to 1.5 cc. are given *intragluteally* and the dose is repeated again in twenty-four hours, and again twenty-four hours later if improvement in the subjective and objective symptoms is not very definite. Usually within forty-eight hours there is great improvement and it is seldom that a third injection is found necessary.

At the same time the following solution is given by mouth until finished:

Rx:

Oak toxin solution	4	0
Aromatic elixir q. s. ad.	90	0

M. Sig.—Begin with gtt. X in water t. i. d. p. c., increasing by one drop each dose until gtt. XX are being taken. Then take one teaspoonful once daily.

By this method tolerance for the poison may be established. It is recommended that this solution be taken in the manner prescribed once a year. It is hardly necessary to warn against getting the solution into a vein; also it should not be given unless one is sure that the dermatitis is due to poison oak and not to the primrose or other plants, hair dye or other chemical irritants.

1 Schamberg: Discussion on Eczema, J. A. M. A., 68:87, Jan. 13, 1917. "Desensitization of Persons Against Ivy Poison," J. A. M. A., 73:1213, Oct. 18, 1919.
2 Strickler: Jour. Cut. Dis., June, 1918.
3 Alderson: Calif. State Jour. of Med., May, 1921.

(240 Stockton Street.)

AN OUTBREAK OF EPIDEMIC JAUNDICE IN NEVADA CITY, CALIFORNIA

By A. H. TICKELL, M. D., Nevada City, Calif.

During the early part of November of last year there occurred in my practice two cases of what then appeared to be catarrhal jaundice. Following these, however, some twenty other cases have arisen, so that it became forcibly impressed on me that an infectious disease was prevailing.

In the Journal of the A. M. A. of January 14, 1922, appears an item regarding suspected epidemic jaundice in New York State, due to groups of suspicious cases in Madison, Oswego, and St. Lawrence Counties. The outcome of the investigation I have not as yet learned.

Dr. Herman of New York City also reports in the Journal of January 28, 1922, that a large number of cases have occurred in that city during the past three months. These reports coincide very closely with conditions existing here.

The infection still persists and new cases are appearing. Age apparently is not a factor as I have had patients as young as five and as old as forty years, the young, however, due to their greater exposure to contact in school and homes, being in the greater number. In homes where two or more children reside, the disease shows a definite tendency to spread from one to the other; the period of exposure to outbreak being about two weeks.

The disease is characterized by sudden onset, abdominal pain, and fever accompanied by chills. The fever continues according to the severity of the cases, which vary greatly. Muscular pains, headache, nasal hemorrhage, severe nausea, enlargement of the liver and spleen, followed often by pronounced general weakness are also usual symptoms. Jaundice appears about the third or fourth day after the onset, with clay-colored stools and bile-stained urine, at times containing blood.

In the Reference Handbook of the Medical Sciences, under the synonym of "Weils Disease," a quite complete history of this disease will be found. The writer, however, describes the conditions as existing in Europe and Japan, stating its occurrence is rare in this country. We must take into consideration the improved living conditions and general hygiene which go far to mitigate the virulence of all infectious diseases, and not be misled when confronted by milder conditions that simulate classical descriptions.

The origin of the infection in this section is obscure, but in all probability it has been brought in by food and spread by rats and mice, as a large proportion of the vegetables and fruits are sent in from the truck farms of the valleys, where foreign and Japanese labor is largely employed.

Treatment has been largely symptomatic, with rest in bed. The initial nausea and tenderness appeared to be controlled by constant hot, moist applications over the region of the gall-bladder. Prognosis has so far been favorable. Prophylactic measures should be taken and all excreta attended to, as in typhoid.

EDITORIALS

THE FIFTY-FIRST ANNUAL MEETING OF THE MEDICAL SOCIETY OF THE STATE OF CALIFORNIA

This issue constitutes the official convention number of the Journal. It contains the complete program and a very considerable amount of information regarding transportation, hotel accommodations, methods of procedure and other facts that members and visitors will want to know.

Every effort has been made to have the program as complete as it is possible to make a program covering so many subjects. An attempt has been made to arrange the different section meetings so that specialties covering allied fields hold their meetings at different hours. It has not been possible to arrange this to the complete satisfaction of the committee, and constructive criticism from various members and section officers of improvements for the next State meeting will be welcomed. The General Sessions have been so arranged that all members and visitors at the convention may attend without losing opportunity to keep in touch with sections that they are interested in.

Every member and all guests at the convention are requested to submit to the secretary suggestions that will tend to make next year's program better than the one of 1922.

It is particularly requested that all members, guests and visitors register as soon as they arrive in Yosemite. An outline map has been made of the valley, showing the location of headquarters, hotels, convention halls, roads, and the times and places of all meetings. These maps will be at the registration desk and at each of the three information offices.

INFORMATION ABOUT ROADS TO YOSEMITE

An Official Statement by W. H. Lewis, Superintendent of the Park

A week of clear, sunshiny days has nearly erased all evidence of winter on the floor of Yosemite Valley, and the cottonwoods, the first of the larger deciduous trees to bud, are showing a tinge of green. The bright, warm days have also had their effect on the snows of the high altitudes, whose rapid melting is filling the watercourses and the great waterfalls are booming again after months of little activity. However, the warm weather has been late in coming and the snow in the back country lies deeper and more solidly packed than in many years. The effect will be to retard the opening of motor roads into the park, but this will be in a measure compensated by the lengthening of the water season.

Yosemite goes into this season of "The Open Road" better equipped than ever to care for its tens of thousands of visitors. Additional housing and feeding accommodations will be made available by the park operators, as well as added transportation facilities, both for rail and road travel.

CHIROPRACTIC AND OSTEOPATHIC INITIATIVES

Two surviving members of the "Quack Quartet" will appear on the ballot handed to each voter at the general election November 7. In numerical order they appear as Number 16—the Chiropractic Initiative, and Number 20—the Osteopathic Initiative. If these "Spinalese Twins" were the only measures which the voters had to consider they would be defeated by an overwhelming majority. The people of California have gone on record innumerable times against anti-health legislation. Again and again the people have expressed emphatic approval of maintaining definite legal, educational and moral requirements for those licensed to treat the sick.

But these two pernicious proposals are placed upon a ballot that will contain fourteen constitutional amendments, bond issues, referendums and other initiatives, some involving questions of very vital importance to the welfare of the State. In addition to these, the voters are confronted with selecting from long lists of candidates the ones best qualified to make, interpret and enforce the laws of the State.

Few voters can spare the time to investigate the extravagant claims made by this aggressive Chiro-osteo combination. If those who are informed neglect to co-operate in broadcasting the facts and exposing the vicious character of these two initiatives, it is probable that quackery will win and create a chaotic condition in the field of medical, hospital and health work. But quackery will be more decisively defeated than in previous campaigns if those who should be interested will co-operate with the League for the Conservation of Public Health in this 1922 campaign.

These two initiatives would *establish Cult Boards* devoted to absurd theories that practically repudiate the successful experience of scientific men and reject the demonstrated facts of modern medicine. They are a *public* challenge to our universities and educational institutions, to the organization and administration of all our health departments. If the Chiro-osteo combination is correct, all the appropriations for medical education, all the wealth and work being spent to combat and conquer disease, should be abandoned as wicked waste of money and effort. Tuberculosis, scarlet fever, diphtheria, infantile paralysis, measles, bubonic plague, smallpox, typhoid fever and other reportable diseases cannot be accurately reported or safely treated by Cultists who advertise that "epidemics are produced to make dollars for Doctors," and who maintain that the cause of all disease is invariably subluxated vertebrae, and the method to cure all disease is to adjust said subluxated vertebrae. The value of vital statistics, the virtue of quarantine laws, the efficacy of all preventive measures would be vitiated by practitioners of such unsafe and unscientific theories.

All health departments, State, County and City, all hospitals interested in maintaining scientific standards, all civic and fraternal organizations,

women's clubs, insurance companies and welfare societies that are engaged in various forms of health work, should actively oppose Number 16—the Chiropractic Initiative, and Number 20—the Osteopathic Initiative. If all these agencies are actively interested in defeating Nos. 16 and 20, we can assure them the effective co-operation of the League and every ethical member of the medical profession. A triumph for quackery will not mean a defeat of the medical profession, but it will mean that hospitals, universities, laboratories, health departments and all valuable health agencies will be jeopardized, because you cannot impede the practice and progress of modern medicine without, at the same time, undermining the various agencies and fundamental sciences that the medical profession employs in its worthy work.

SALARIES VERSUS FEES

The office of the State Society is receiving a very considerable number of inquiries as to whether or not it is ethical for a physician to work for a salary or whether all work should be strictly upon a fee basis. The editor is not prepared to answer this question until the Council or the House of Delegates have expressed themselves.

It is interesting, however, to look at a few facts and estimates: It is probable that more than 30 per cent of the licensed physicians of the United States are men who are receiving salary compensation of one sort or another. It is probable that a slightly smaller percentage of the members of the California State Society are also receiving salary compensation. Salaries are paid for full-time work, part-time work, or more or less indirectly as piece work or "for service" compensation. It is, of course, a fact that medical departments of the Army, Navy, U. S. Public Health Service and the medical department of every one of our Federal Bureaus of every description are operated by full-time salaried physicians. Teachers in medical schools and universities receive part-time or full-time salaries. It is also a fact that the vast majority of state and county, city and municipal health officers are paid what amounts to salary compensation, usually for part-time service. A large number of insurance companies of various kinds have medical departments of salaried men, either salaried in full or for part time. Most of the insurance companies have their medical advisory boards in their home offices upon a salary basis for part-time work. The majority of large industrial and commercial organizations—railroads, telegraph companies, industrial plants, lumber companies, mines and similar organizations—have their own salaried personnel constituting their medical departments.

This phase of medical and public health development on a salary basis is increasing everywhere. Transportation lines, railroad companies, and steamship lines employ thousands of physicians on full-time salaries. Many physicians themselves and large numbers of hospitals engage a certain percentage of their assistants on full-time or part-time salaries. Publications, including newspapers and magazines, employ salaried medical departments. News service bureaus and organizations of one sort or another employ a considerable number of physicians on full-time salaries. Hospital associations, group organizations operated by physicians and by laymen, and similar activities are employing constantly increasing numbers of physicians on salary, and so on through dozens of other activities.

With these facts before us, is it not purely an academic question as to whether or not it is ethical for a physician to work for salary compensation instead of a fee schedule?

MAKING A MOCKERY OF THE LAW

There are about 7000 persons who have passed the legal tests and are authorized by law to practice the healing art in the State of California. There are others who are practicing illegally. Not only is the law passively disregarded in this respect, but the majority of these law violators are open and aggressive in their denunciation of the law and in their disrespect for its provisions. Magazines, newspapers and other circulating media of information carry flaunting advertisements of fake claims from these fraudulent healers who are practicing in open violation of the law. This has become so extensive with such support by some elements of the public press, by officers of the law, that the laws of California are being made a mockery.

No other law, even including the Eighteenth Amendment, is being so widely violated and disregarded as the Medical Practice Act, and these violations are causing more injury to the public and to the lives and health of individual citizens than the violation of all other laws put together.

These law breakers are now asking the people of California to support them in their law violation by making their illegal acts legal.

MORE ABOUT INSURANCE

The recent editorials in the California State Journal of Medicine have aroused extensive interest in the insurance world and are being broadcasted by the hundreds of thousands as reprints published and distributed by various insurance companies.

One result of this publicity has stimulated insurance companies that do not patronize the advertising pages of your own State Medical Journal or other medical journals to increase the volume of their "direct-by-mail advertising." The advertising columns of the California State Journal of Medicine are open to accredited insurance companies. All advertising matter of insurance companies in the columns of your Journal has been submitted to qualified, disinterested insurance specialists and bankers, and no advertisement is accepted by your publication that has not the full endorsement of those competent to judge insurance values.

Our members surely will make no mistake by patronizing insurance or other advertisers who have passed censorship and have purchased space in your own publication.

PROGRAM

THE FIFTY-FIRST ANNUAL SESSION OF THE MEDICAL SOCIETY OF THE STATE OF CALIFORNIA HELD AT YOSEMITE NATIONAL PARK, MAY 15, 16, 17, 18, 1922

OFFICERS AND COMMITTEES, 1922

John H. Graves, San Francisco, President.
H. G. Brainerd, Los Angeles, President-Elect.
Alfred C. Reed, San Francisco, First Vice-President.
Joseph Catton, San Francisco, Second Vice-President.
W. E. Musgrave, San Francisco, Secretary-Editor.
Hartley F. Peart, San Francisco, General Counsel.
Hubert T. Morrow, Los Angeles Assistant General Counsel.
Mr. Celestine J. Sullivan, Managing Editor.
Mr. William H. Barry, Superintendent of Publications.

COUNCILORS

First District—Paul M. Carrington, San Diego (1924)—San Diego, Riverside, Orange, San Bernardino, and Imperial Counties.

Second District — William H. Kiger, Los Angeles (1922)—Los Angeles, Santa Barbara, Ventura and Kern Counties.

Third District — T. C. Edwards, Salinas (1924)—San Luis Obispo and Monterey Counties.

Fourth District — Fred R. DeLappe, Modesto (1924)—Fresno, Kings, Tuolumne, Merced, Mariposa, Madera, Tulare and Stanislaus Counties.

Fifth District — Frank H. Paterson, San Jose (1923)—Santa Clara, San Mateo, San Benito and Santa Cruz Counties.

Sixth District—C. G. Kenyon, San Francisco, Chairman (1922)—San Francisco County.

Seventh District—Edward N. Ewer, Oakland (1923)—Alameda, Contra Costa, San Joaquin and Calaveras Counties.

Eighth District — James H. Parkinson, Sacramento (1922)—Sacramento, Amador, El Dorado, Alpine, Placer, Nevada Yuba, Sutter, Sierra, Yolo, Butte, Plumas, Lassen, Mono, Inyo, Glenn, Colusa, Tehama, Shasta, Modoc and Siskiyou Counties.

Ninth District—James H. McLeod, Santa Rosa (1923)—Marin, Sonoma, Lake, Mendocino, Solano, Napa, Del Norte, Humboldt and Trinity Counties.

Councilors-at-Large—O. D. Hamlin, Oakland (1922); Rene Bine, San Francisco (1923); George H. Kress, Los Angeles (1923); William T. McArthur, Los Angeles (1923); Saxton T. Pope, San Francisco (1924); C. Van Zwalenburg, Riverside (1923).

COMMITTEES

Committee on Scientific Program—W. E. Musgrave, chairman; Lemuel P. Adams, Oakland (1922); F. M. Pottenger, Monrovia (1923); F. F. Gundrum, Sacramento (1924); Walter V. Brem, Los Angeles (1925).

Publicity Committee—Mr. Celestine J. Sullivan, chairman; Alfred C. Reed, Donald J. Frick, Dewey R. Powell, J. R. Walker, Robert Pollock, Mr. O. Van Wyck, secretary.

Publicity Bureau — Rene Bine, chairman; John H. Graves, C. G. Kenyon, Hartley F. Peart, W. E. Musgrave.

Committee on Transportation and Hotels—Mr. H. H. Hunkins, chairman; James H. Parkinson, Morton Gibbons, Paul M. Carrington, T. C. Edwards, William H. Kiger, Mr. R. E. McCormick, secretary.

Auditing Committee—Rene Bine, Saxton T. Pope.

Committee on Industrial Accident Insurance Work—James H. Parkinson, chairman; John H. Graves, Gayle T. Moseley, Hartley F. Peart, W. E. Musgrave.

Assistant Secretaries for Convention — Edna L. Barney, H. A. R. Kreutzmann, Hans Schiffbauer, William W. Cross, Charles L. Bennett, Harlan Shoemaker, Barton Powell, T. M. McNamara, L. M. Coy, George J. Hall, George P. Worthington, W. E. Bates, Ferdinand Stabel, T. A. Card, Dan H. Moulton, E. P. Cook, W. D. Sansum.

GENERAL HEADQUARTERS AND MEETING HALLS

Diagrammatic map, showing location of various offices and meeting halls, will be distributed at Registration and Information desks. See also diagram, page 158.

(A) Secretary's office—Architect's office in Village.
(B) Registration Bureau—Sentinel Hotel Lobby in Village.
(C) Information offices — Yosemite Porch at Lodge, Sentinel Hotel Lobby in Village; Lobby at Camp Curry.
(D) Consolidated Ticket office—Transportation office at Lodge.
(E) Publicity Committee—Advertising room in Village.
(F) Council Room—Directors room in Village.

1. Convention Hall, seats 800, located in Village.
2. Church, seats 150, located in Village.
3. General Store, seats 250, located in Village.
4. Operating Office, seats 100, located in Village.
5. Auditor's Office, seats 100, located in Village.
6. Dining room, Sentinel Hotel, seats 150, located in Village.
7. Linen room, seats 150, located at Lodge.

(Letters and figures refer to locations shown on the map.)

GENERAL OUTLINE OF THE MEETINGS

There will be three sessions on Monday, Tuesday and Wednesday, and two sessions on Thursday.

Uniform hours for all meetings are provided for: 10 to 12:30; 2 to 4:30 p. m. and 8 to 10 p. m.

The places and time of all meetings are shown in the diagram.

General Sessions — Three general sessions have been arranged so that all persons may attend.

Section on Medical Economics, Education, Public Health and Hospitals—This section is held under the auspices of the League for the Conservation of Public Health. The time of this section meeting is so arranged that all may attend.

Section on Pathology and Bacteriology—Two meetings.

Section on Radiology, Roentgenology and Radium Therapy—Two meetings.

Section on Industrial Medicine and Surgery — Two meetings.

Section on Technical Specialties — This section includes: The California Association of Physiotherapists; The California Association of Radiographers; The California Association of Medical Social Workers; The California Association of Dietitians; The California Association of Laboratory Technicians.

Group of Medical Sections

Section on General Medicine—Four meetings, including one meeting devoted to tuberculosis.
Section on Pediatrics—Three meetings.
Section on Neuropsychiatry—Two meetings.

Group of Surgical Sections

Section on General Surgery—Three meetings.
Section on Eye, Ear, Nose and Throat—Two meetings.
Section on Urology—Two meetings.
Section on Orthopedic Surgery—Two meetings.
Section on Anesthesiology—One meeting.
Section on Obstetrics and Gynecology—Three meetings.

Council Meetings

All meetings of the Council will be held in the Board of directors' room of the Yosemite Transportation Company.

First Meeting—Monday, May 15, at 2 p. m.
Second Meeting—Tuesday, May 16, at 2 p. m.
Third Meeting—Wednesday, May 17, at 2 p. m.
Fourth Meeting—Thursday, May 18, at 2 p. m.

Meetings of the Council With the Presidents and Secretaries of Constituent Societies

There will be two of these important meetings, held in Hall No. 6 (Sentinel Dining Room). All members of the Council and all presidents and secretaries and as-

DIAGRAM SHOWING PLACES AND TIME OF ALL MEETINGS

DATE	HALL 1 Convention Hall	HALL 2 Church	HALL 3 General Store	HALL 4 Operating Office	HALL 5 Auditor's Office	HALL 6 Sentinel Dining Room	HALL 7 Sentinel Dining Porch	GENERAL HEADQUARTERS
Monday May 15 10–12:30	General Everybody Invited						This hall is reserved as a meeting place for any groups, committees, councils or other bodies who desire to have space for meetings.	
Monday May 15 2–4:30		General Medicine	Obstet. and Gyn.	Eye, Ear, Nose and Throat	Urology	Tech. Spec. General Meeting		Council
Monday May 15 8–10	House of Delegates			Radiology	Industrial Med. and Surg.	Section Anesthesiology		
Tuesday May 16 10–12:30	General Everybody Invited					Council and County Officers		
Tuesday May 16 2–4:30	Pathology and Bacteriology	General Medicine	Obstet. and Gyn.	Eye, Ear, Nose and Throat	Orthopedic Surgery	Pac. Coast Ass'n of Anesthetists		Council
Tuesday May 16 8–10	State and Co. Officers, Council and Fraternal Delegates	General Surgery	Pediatrics	Neuropsychiatry	Urology	Pac. Coast Ass'n of Anesthetists		
Wednesday May 17 10–12:30	League Everybody Invited					Tech. Spec. Physiotherapists		
Wednesday May 17 2–4:30	Pathology and Bacteriology	General Surgery	Pediatrics	Neuropsychiatry		Med. Social Workers		Council
Wednesday May 17 8–10	House of Delegates	General Medicine	Obstet. and Gyn.		Orthopedic Surgery			
Thursday May 18 10–12:30	General Everybody Invited					Council and County Officers		
Thursday May 18 2–4:30	Gen'l Med. Tuberculosis	General Surgery	Pediatrics	Radiology	Industrial Med. and Surg.			Council

sistant secretaries of constituent societies are requested to be present at these meetings.

First Meeting—Tuesday, May 16, at 11 a. m.
Second Meeting—Thursday, May 18, at 11 a. m.

Fraternal Meeting of Officers and Representatives of Western States Societies

An informal gathering of the Council and the representatives and fraternal delegates from other Western States for the discussion of problems of mutual interest. All persons included in this group are requested without further invitation to meet in Hall No. 1 (Convention Hall) on Tuesday, May 16, at 8 p. m.

HOUSE OF DELEGATES

The House of Delegates will hold two meetings.

Membership

Councilors—First District, Paul M. Carrington (1924); Second District, William H. Kiger (1922); Third District, T. C. Edwards (1924); Fourth District, Fred R. DeLappe (1924); Fifth District, Frank H. Paterson (1922); Sixth District, C. G. Kenyon (1922); Seventh District, Edward N. Ewer (1923); Eighth District, James H. Parkinson (1922); Ninth District, James H. McLeod (1923).

Councilors-at-Large—O. D. Hamlin (1922), Rene Bine (1923), George H. Kress (1923), William T. McArthur (1923), Saxton T. Pope (1924), C. Van Zwalenburg (1923).

DELEGATES	ALTERNATES
Alameda County (6)	
C. L. McVey	L. P. Adams
P. S. Nusbaumer	W. A. Clark
W. H. Strietmann	R. A. Glenn
Dudley Smith	Gertrude Moore
David Hadden	C. W. Page
C. A. Dukes	C. A. De Puy
Butte County (1)	
D. H. Moulton	N. T. Enloe
Contra Costa County (1)	
H. L. Carpenter	L. St. John Hely
Fresno County (2)	
J. R. Walker	J. H. Pettis
W. W. Cross	Guy Manson
	A. B. McConnell
Glenn County (1)	
Etta Lund Steinegger	T. H. Brown
Humboldt County (1)	
John N. Chain	
Imperial County (1)	
L. C. House	Eugene Le Baron
Kern County (1)	
F. J. Gundry	F. A. Hamlin
Lassen-Plumas Counties (1)	
Los Angeles County (22)	
Donald Frick	Joseph M. King
Harlan Shoemaker	Forrest C. Swearingen
Granville MacGowan	Carl H. Parker
J. Mark Lacey	Wallace A. Reed,
Walter L. Huggins	H. H. Heylmun
Carl Rand	Harriman Jones
Raymond G. Taylor	F. L. Morgan
William Bowman	Clarence G. Toland
Charles C. Browning	John Mackey
John P. Nuthall	Roland Cummings
A. S. Granger	Henry B. Lissner
Walter V. Brem	J. G. Lynch
W. T. McArthur	Frank S. Dillingham
Charles L. Bennett	A. W. Moore
Lyle G. McNeile	H. E. Kirshner
C. P. Thomas	A. T. Newcomb
J. K. Swindt	E. A. Newton
F. C. E. Mattison	J. T. Fisher
Charles D. Lockwood	Lewis Norton
Rolla G. Karshner	Percy Magan
Albert Soiland	Neal N. Wood
Eleanor Seymour	Robert V. Day
	Rex Duncan
Madera County (1)	
Dow H. Ransom	
Marin County (1)	
Arthur H. Mays	H. O. Howitt
Mendocino County (1)	
Harper Peddicord	
Merced County (1)	
W. E. Lilley	J. L. Mudd
Monterey County (1)	
Henry J. Koenecke	W. R. Reeves
Napa County (1)	
Orange County (1)	
J. C. Crawford	Harry E. Zaiser
Placer County (1)	
E. E. Ostrum	F. E. McCullough

DELEGATES	ALTERNATES
Riverside County (1)	
W. W. Roblee	A. L. Kramkamp
Sacramento County (2)	
E. T. Rulison, Jr.	J. W. James
E. C. Turner	G. N. Drysdale
San Benito County (1)	
Emma E. McKay	T. F. Thorpe
San Bernardino County (1)	
L. M. Coy	E. J. Eytinge
San Diego County (3)	
C. M. Hosmer	J. C. E. Nielsen
Thos. Coe Little	J. E. Jennison
John C. Yates	E. H. Crabtree
San Francisco County (15)	
H. E. Alderson	P. K. Brown
W. C. Alvarez	E. I. Bartlett
M. O. Austin	F. B. Carpenter
W. W. Boardman	W. B. Coffey
Leo Eloesser	H. W. Gibbons
G. H. Evans	F. R. Girard
W. S. Franklin	E. F. Glaser
H. P. Hill	J. H. Graves
Sol. Hyman	G. E. Ebright
E. S. Kilgore	Frank Hinman
Lovell Langstroth	T. D. Maher
Howard Morrow	H. C. Moffitt
Wm. E. Stevens	Emmet Rixford
V. G. Vecki	G. G. Moseley
C. F. Welty	Harry Spiro
	A. B. Spalding
San Joaquin County (2)	
Barton J. Powell	J. D. Dameron
Margaret Smythe	H. C. Peterson
San Luis Obispo County (1)	
G. L. Sobey	
San Mateo County (1)	
W. C. Baker	F. H. Smith
Santa Barbara County (1)	
R. Manning Clarke	George R. Luton
	Franklin R. Nuzum
Santa Clara County (2)	
George L. Barry	J. H. Shepard
Clyde Wayland	C. E. Saunders
Santa Cruz County (1)	
P. T. Phillips	E. Lee Birch
Shasta County (1)	
Ferdinand Stabel	Sherman T. White
Siskiyou County (1)	
Solano County (1)	
Robert Dempsey	R. Leachman
Sonoma County (1)	
C. W. Shipley	J. H. Shaw
Stanislaus County (1)	
E. F. Reamer	John Cooper
Tehama County (1)	
Tulare County (1)	
Austin Miller	R. N. Fuller
Tuolumne County (1)	
E. H. Reid	William L. Hood
Ventura County (1)	
B. E. Merrill	
Yolo County (1)	
Yuba-Sutter Counties (1)	
E. E. Gray	John Duncan

FIRST MEETING OF HOUSE OF DELEGATES

Hall No. 1 (Pavilion) Monday, May 15, 8 p. m.

Order of Business

1. Calling to Order.
2. Roll Call.
3. Report of President.
4. Appointment of the Reference Committee by the President.
5. Report of the Council, by C. G. Kenyon, Chairman.
6. Report of the Committee on Scientific Program.
7. Report of the Auditing Committee.
8. Report of Committee on Expert Medical Testimony.
9. Report of Committee on Local and State Expenditures for Medical and Sanitary Measures.
10. Report of Committee on Codification of Constitution and By-Laws of the State Medical Society.
11. Report of Committee on Industrial Accident Insurance Work (Presented before the general sessions).
12. Report of the Secretary-Editor, W. E. Musgrave.
13. Unfinished Business.
14. New Business.
15. Reading and Adoption of Minutes.
    Adjournment.

SECOND MEETING OF HOUSE OF DELEGATES

Hall No. 1 (Pavilion) Wednesday, May 17, 8 p. m.

Order of Business

1. Calling to Order.
2. Roll Call.
3. Announcement of the Place of Meeting, 1923.
4. Election of Officers:
   (a) Election of President-Elect.
   (b) Election of First Vice-President.
   (c) Election of Second Vice-President.
   (d) Election of Secretary-Editor.
   (e) Election of Councilors:

   Second District—Incumbent, William H. Kiger (1922)—Los Angeles, Santa Barbara, Ventura, and Kern Counties.

   Fourth District—Incumbent, Fred R. DeLappe (appointed by Council to fill vacancy caused by resignation of D. H. Trowbridge, in accordance of Article V, Sec. 2 of by-laws) Fresno, Kings, Tuolumne, Merced, Mariposa, Madera and Stanislaus Counties.

   Sixth District—Incumbent, C. G. Kenyon (1922)—San Francisco County.

   Eighth District—Incumbent, James H. Parkinson (1922)—Sacramento, Amador, El Dorado, Alpine, Placer, Nevada, Yuba, Sutter, Sierra, Yolo, Butte, Plumas, Lassen, Mono, Inyo, Glenn, Colusa, Tehama, Shasta, Modoc, and Siskiyou Counties.

   At Large—O. D. Hamlin (1922).

   (f) Election of Member on Program Committee (four years)—Incumbent, Lemuel P. Adams (1922).

   (g) Election of one Delegate to A. M. A. (four authorized)—Incumbents: Bert Ellis (1922), Albert Soiland (1922), John H. Graves (1922).

   (h) Election of one Alternate to A. M. A. (four authorized)—Incumbents: C. Van Zwalenburg (1922), Edward N. Ewer (1922), E. C. Fleischner (1922).
5. Report of Reference Committee.
6. Presentation of President.
7. Presentation of President-Elect.
8. Reading and Adoption of Minutes.
   Adjournment.

GENERAL INFORMATION

General headquarters will be at and near the Sentinel Hotel.

The offices of the President, President-Elect, Council and Committees will be at general headquarters.

The office of the State Secretary and Assistant Secretaries will be at headquarters.

A number of assistant secretaries have been appointed for the Convention. Among other duties, one of them will make contact with the chairman and secretary of each section for such assistance with the program and other problems as it is possible to give.

Headquarters of the League for the Conservation of Public Health will be a part of general headquarters.

Registration—The registration desk is located in the lobby of the Sentinel Hotel. All persons, whether members or not, are requested to register as soon as they arrive in Yosemite. Beginning Sunday, May 14, registration secretaries will be on duty daily from 9 a. m. until 4 p. m.

Information—One information desk will be maintained in the lobby of the Sentinel Hotel; one at Yosemite Lodge porch, and another in the lobby at Camp Curry.

Railroad Tickets—The San Francisco and Oakland Terminal lines and the Yosemite Transportation Company will maintain a consolidated ticket office at Yosemite Lodge Transportation office. All questions regarding tickets or transportation should be taken up with this office.

Guests and Visitors—All guests and visitors are requested to register. All scientific meetings are open to visitors and guests.

Badges—Two kinds of badges will be issued by the registration bureau. All members of the State Society will be issued the usual membership badge. A special badge will be issued to all guests and fraternal delegates who are attending the meetings upon official invitation of the Society.

Ribbons for Delegates and Alternates—The usual official ribbon is provided for this purpose and will be issued to all persons authorized to wear it.

Membership Cards—Every member in good standing in the California State Medical Society has been issued an official membership card for 1922. This card may be useful in connection with railroad tickets, and all members are requested to have their cards with them.

Suggestions and Constructive Criticism—The officers and committees have tried to do everything possible to

make the meeting a success. Suggestions and constructive criticism calculated to make future meetings more useful will be welcomed by any of the officers or by the Publicity Committee. Complaints of whatever character should be made to the Publicity Committee.

The A. M. A. Meeting at St. Louis. All persons desiring to go to the A. M. A. meeting at St. Louis should get in touch with the Committee on Transportation and Hotels at Yosemite Lodge as soon as possible after arrival in Yosemite. If 125 or more desire to make this trip and make their wishes known to the committee before Wednesday at noon, a special train (the California State Medical Society Special) may be arranged for.

Social Program—No set social program has been arranged. The unusual attractions of Yosemite are believed to make this inadvisable. It is hoped that members and guests will form their own social contacts for sports, dinners, hiking and visits to places of interest. The program has been arranged so as to allow much time for amusement and recreation. There are no meetings before 10 a. m. and none between 12:30 and 2 p. m., and none between 1:30 and 8 in the evening.

Hospital. The Yosemite Hospital is located near Yosemite Lodge. Dr. Frederick Stein, who is in charge of the hospital, states that physicians and nurses are on duty at all hours.

Bus Line—The Yosemite Transportation System will maintain an adequate "street car" service between all meeting places of the various sections and the various hotels, including Camp Curry and the Lodge. The fare between any two points is 10 cents.

Press Representatives—Accredited press representatives are welcome and they will be accorded every possible courtesy. Press headquarters will be in the office of the Committee on Publicity.

Publicity—All publicity is in the hands of the Publicity Committee. It is requested that all persons having matter of "news" value report it to this committee. It is particularly requested that all "news" about any phase of the convention be given out through the official committee and in no other way.

Exhibits—After mature deliberation by the Council and the Publicity Bureau it has been decided that no exhibits will be authorized or permitted. Accredited representatives of firms recognized in the advertising columns of the "Journal" and "Better Health" will be accepted as accredited visitors to the convention and authorized to solicit members and guests. All such representatives will be issued cards by the Secretary upon application.

Daily Bulletin. Mr. W. H. Barry, Superintendent of Publications of the State Society, will publish a daily bulletin during the four days of the meeting. The Bulletin will be issued every morning between 10 and 12:30 during the time the general sessions are holding their meetings. Items for the "Bulletin" should be left with the Publicity Committee or at any information desk.

Social Hosts—One of our members will be assigned as host to each of our invited guests. These assignments will be made at the Registration Bureau.

Rules Regarding Papers and Discussions at the State Meeting—Upon recommendation of the Publicity Bureau the following rules regarding papers have been adopted by the Council:

1. The maximum time that may be consumed by any paper is fifteen minutes, provided that not to exceed ten minutes' latitude may be allowed invited guests at the discretion of the presiding chairman.

2. Motions from the floor to extend the time of an author may not be entertained by the presiding officer.

3. The maximum time permitted any individual discussant on any paper is four minutes. This also applies to the author in closing his discussion. No discussant may speak more than once upon the same subject.

4. A copy of each and every paper presented at the State meeting must be in the hands of the chairman or secretary of the section or in the hands of the general secretary before the paper is presented.

5. Manuscript not accepted by the Publicity Bureau for publication in the Journal will be returned to the author as soon as practicable. Authors desiring to publish their paper elsewhere than in the Journal may have their manuscript returned to them upon written request to the State Secretary.

6. No paper will be accepted by the General Program Committee nor by Section Program Committees unless accompanied by a synopsis of not to exceed 50 words.

7. Papers shall not be "read by title."

8. No member may present more than one paper at any one State meeting, provided that members may present additional papers before Sections on Technical Specialties; and provided further, that a member may be a collaborator on more than one paper, if these papers are presented by different authors.

9. Failure on the part of an author to present a paper precludes acceptance of future papers from such author for a period of two years, unless the author explains to the satisfaction of the Publicity Bureau his inability to fulfill his obligation.

GENERAL SESSIONS

JOHN H. GRAVES, M. D., President,
977 Valencia Street, San Francisco.

W. E. MUSGRAVE, M. D., Secretary,
912 Butler Building, San Francisco.

FIRST MEETING

Hall No. 1 (Convention Hall), Monday, May 15, 10 a. m.

1. *President's Annual Address*—John H. Graves, M. D., 977 Valencia Street, San Francisco.
2. *The Contributions of Vivisection to Public Welfare*—Karl F. Meyer, Hooper Foundation, San Francisco.
3. *Women Physicians and the Program of Better Medicine and Better Public Health*—May E. Walker, M. D., Oakland Bank of Savings Bldg., Oakland.
4. *The Problems of Industrial Accident Insurance*—James H. Parkinson, M. D., 1601 I Street, Sacramento.
   Report of the Committee of the Council of the State Society, with comments by the chairman.
5. *Some Problems of Medical and Indemnity Defense*—Hartley F. Peart, Humboldt Bank Building, San Francisco.
6. *The Neuropsychiatry Problem*—Walter T. Williamson, M. D., Corbett Building, Portland, Oregon.

SECOND MEETING

Hall No. 1 (Convention Hall), Tuesday, May 16, 10 a. m.

ALFRED C. REED, M. D., First Vice-President,
350 Post Street, San Francisco.

EDNA L. BARNEY, M. D., Assistant Secretary,
Children's Hospital, San Francisco.

1. *The Place of Pathology in the Practice of Medicine*—Walter V. Brem, M. D., Pacific Mutual Building, Los Angeles.
2. *Medical Education of the Present and of the Near Future*—Ray Lyman Wilbur, M. D., Stanford University, Palo Alto.
3. *The Place of the Clinician in Medicine of the Future*—Herbert C. Moffitt, M. D., Schroth Building, San Francisco.
4. *The Diagnostic and Prognostic Value of the Breath-Holding Test*—F. H. McMechan, M. D., Avon Lake, Ohio.
5. *What Is Meant by the Psychoneuroses*—Joseph H. Collins, M. D., 35 W. 54th Street, New York City, New York.
6. *What the General Practitioner Can Do to Improve Maternity Conditions*—Reginald K. Smith, M. D., 391 Sutter Street, San Francisco.

THIRD MEETING

Medical Economics, Education, and Hospitals

This Section is under the auspices of *The League for the Conservation of Public Health.*

DUDLEY SMITH, M. D., President,
Oakland.

W. T. MCARTHUR, M. D., Secretary,
Los Angeles.

GENERAL MEETING

Hall No. 1 (Convention Hall), Wednesday, May 17, 10 a. m.

1. *Progress and Problems of Public Health Work*—Walter M. Dickie, M. D., Secretary California State Board of Health.
2. *Hospital Betterment in California*—Percy T. Magan, M. D., Medical Secretary Seventh Day Adventist General Conference Pacific Coast States.
3. *Insidious Issues of 1922*—Celestine J. Sullivan, Executive Secretary League for the Conservation of Public Health.

4. *The Contribution of Modern Medicine to Commerce*—Hon. John D. Fredericks, President Los Angeles Chamber of Commerce.
5. *Guarding the Health of Our Citizens*—Hon. James Rolph, Jr., Mayor of San Francisco.

FOURTH MEETING

Hall No. 1 (Convention Hall), Thursday, May 18, 10 a. m.

JOSEPH H. CATTON, M. D., Second Vice-President, 209 Post Street, San Francisco.

HANS E. SCHIFFBAUER, M. D., Assistant Secretary, Title Insurance Building, Los Angeles.

1. *Address of President-elect*—Henry G. Brainerd, M. D., Brockman Building, San Francisco.
2. *The Duties of the General Practitioner in the Anti-Tuberculosis Program*—Charles J. Minor, M. D., Asheville, North Carolina.
3. *Medical and Health Programs of Organized Industries*—Walter B. Coffey, M. D., Medical Building, San Francisco.
4. *The Problems and Practice of "Group Medicine"*—Donald J. Frick, M. D., Van Nuys Building, Los Angeles.
5. *Outstanding Features of Recent Progress in Surgery*—George Thomason, M. D., Hollingsworth Building, Los Angeles.
6. *What the General Practitioner Can Do to Improve the Diagnosis and Treatment of Diseases of Children*—Robert Langley Porter, M. D., Sehroth Building, San Francisco.

PATHOLOGY AND BACTERIOLOGY SECTION

WILLIAM OPHULS, M. D., Chairman, Stanford Medical School, San Francisco.

ROY W. HAMMACK, M. D., Secretary, Brockman Building, Los Angeles.

FIRST MEETING

Hall No. 1 (Convention Hall), Tuesday, May 16, 2 p. m.

1. Chairman's Address and Secretary's Report.
2. *The Effect of X-ray Upon the Structure and Bacterial Flora of the Tonsils*—F. R. Nuzum, M. D., Cottage Hospital, Santa Barbara.
3. *A Clinical and Pathological Study of Fifty Cases of Hyperthyroidism*—R. B. Hill, M. D., Merchants National Bank Building, Los Angeles.
4. *Germanium Dioxide and Erythropoiesis*—W. T. Cummins, M. D., San Francisco Hospital, San Francisco.
5. *Some Limitations on the Agglutination Reaction in the Identification of Sporulating Anaerobes*—Ivan C. Hall, Ph. D., Berkeley.

SECOND MEETING

Hall No. 1 (Convention Hall), Wednesday, May 17, 2 p. m.

1. Election of Section Officers and Transaction of Other Section Business.

Symposium on Coccidioidal Granuloma

2. *A Report of Cases of Coccidioidal Granuloma with Especial Reference to Meningeal Involvement*—Ernest C. Dickson, M. D., Stanford Hospital, San Francisco.
3. *Coccidioides Immitis as a Cause of Meningitis with Hydrocephalus*—Glanville Y. Rusk, M. D., Hooper Foundation, San Francisco.
4. *A Report of Cases of Coccidioidal Granuloma Observed in Southern California*—Roy W. Hammack, M. D., Brockman Building, Los Angeles; J. Mark Lacey, M. D., Auditorium Building, Los Angeles.
5. *Torula Infection*—Newton G. Evans, M. D., Loma Linda.
6. *Lethargic Encephalitis*—N. T. McArthur, M. D., Napa State Hospital, Imola.

RADIOLOGY SECTION

(Including Roentgenology and Radium Therapy)

ALBERT SOILAND, M. D., Chairman, 1407 S. Hope Street, Los Angeles.

H. E. RUGGLES, M. D., Secretary, Butler Building, San Francisco.

FIRST MEETING

Hall No. 4 (Operating Office), Monday, May 15, 8 p. m.

1. Chairman's Address and Secretary's Report.
2. *Recent Progress in Radio-Therapy* (Illustrated with lantern slides)—Rex D. Duncan, M. D., 1151 W. 6th Street, Los Angeles.

   Modern methods in application of radium with illustrative cases.
3. *Deep Therapy*—John M. Rehfisch, M. D., 391 Sutter Street, San Francisco.

   Limitations of previous apparatus for intensive radiation.

   Personal experience with new 300,000 volt transformer.
4. *The Physical Basis of Modern Roentgen Therapy*—Mr. Frank Rieber, 693 Mission Street, San Francisco.

   Importance of knowledge of fundamental physical facts in design and use of apparatus for intensive therapy. Current fallacies concerning measurement of electrical factors in Roentgen ray work.
5. *Diagnosis of Cases with So-called Pathological Gall-Bladder Symptoms*—Caro W. Lippman, M. D., Butler Building, San Francisco.

SECOND MEETING

Hall No. 4 (Operating Office), Thursday, May 18, 2 p. m.

1. Election of Section Officers and Transaction of Other Section Business.
2. *Gastric Ulcer Complicated by Jejunal Ulcer*—Lloyd B. Crow, M. D., 391 Sutter Street, San Francisco.

   Object of reporting cases. Detailed reports of two cases.
3. *Enteroliths*—W. W. Boardman, M. D., 350 Post Street, San Francisco.

   Comparative rarity of condition; importance of thorough examination; case reports.
4. *Measurements Based Upon Roentgen Examination of 100 Normal Children*—Elizabeth Schulze, M. D., University California Hospital, San Francisco.

   Attention directed to sphenoidal angle by Pacini in 1921; survey of 100 normal children in effort to check his results; normal sphenoidal angle found to be considerably larger than figures given by Pacini; other measurements.
5. *Roentgen Examination of Chests in Children*—Orrin S. Cook, M. D., Flood Building, San Francisco.

   Lobar and bronchopneumonia in children; difference between their appearance in children and adults; atypical effusions and empyemas; tuberculosis in children—lung tumors.
6. *Diverticula of the Cardiac End of the Stomach*—Chas. M. Richards, M. D., Garden City Bank Building, San Jose.

   Rarity of condition; symptomatology; report of cases.

   General demonstration of lantern slides. Members are urged to bring slides of interesting cases for informal discussion.

INDUSTRIAL MEDICINE AND SURGERY SECTION

E. W. Cleary, M. D., Chairman,
177 Post Street, San Francisco.

Packard Thurber, M. D., Secretary,
906 Black Building, Los Angeles.

FIRST MEETING

Hall No. 5 (Auditor's Office), Monday, May 15, 8 p. m.

1. Chairman's Address and Secretary's Report.
2. *An External Bridge for the Fixation of Compound Fractures*—Charles A. Dukes, M. D., Central Bank Building, Oakland.

   History; difficulties in mechanical device; dangers of infection; a simplified plate easy of mechanical adjustment, readily attainable and adaptable to any type of long bone fracture; report of cases.

   Discussion opened by George Rothganger, M. D., 1501 San Pablo Avenue, Oakland, and Alvin Powell, M. D., 3105 Grove Street, Oakland.
3. *The Necessity for More Accurate Data in the Surgeon's Permanent Disability Report*—Frank E. Raynes, M. D., 240 Stockton Street, San Francisco.

   Attention invited to letter of instructions from Industrial Accident Commission; necessity of uniformity; necessity of full and accurate measurements for lost function; necessity of accurate record of occupation when hurt, age and wages; permanent disability rating is not applicable while improvement in function can be obtained by treatment.
4. *A New Method of Treating Fractures of the Carpal Scaphoid*—T. J. Nolan, M. D., Flood Building, San Francisco.
5. *Resection of the Distal End of the Ulna to Compensate for Shortening of the Radius Following Fracture*—Carl L. Hoag, M. D., 177 Post Street, San Francisco.

   Preliminary Report of a Simple and Effective Treatment for a Common and Serious Disability. Lantern Slides.

   Fracture of the radius with shortening results in characteristic changes at the wrist, whether the fracture is in the shaft or at the distal end; these changes are apparently due to the resulting disproportion in the length of the two bones, and consist of a protrusion of the ulna into the carpal region, and loss of strength and limitation of range of motion, especially in the wrist. Findings at operation suggest that there is also a fracture of the triangular cartilage between the radius and ulna at time of injury. Removal of the distal end of the ulna re-establishes the length-relations between radius and ulna, and the soft parts with their undisturbed attachments to the periosteum, quickly readjust themselves. Selection of cases; technique and after-care.
6. *Industrial Medicine and the General Practitioner*—Gayle G. Moseley, M. D., 333 Pine Street, San Francisco.

SECOND MEETING

Hall No. 5 (Auditor's Office), Thursday, May 18, 2 p. m.

1. Election of Section Officers and the Transaction of Other Section Business.
2. *The Conservative Treatment of Fractures of the Elbow Joint*—Edgar L. Gilcreest, M. D., Hahnemann Hospital, San Francisco.

   Points in the anatomy of the elbow joint; movements of the elbow joint; classification of fractures of the elbow joint; treatment; conservative versus operative or open reduction, with advantages of each method and disadvantages of each method; flexion versus traction; necessity for frequent X-ray controls.
3. *So-called "Chauffeur's Fractures"*—Philip Stephens, M. D., Pacific Electric Building, Los Angeles.

   Incidence of fracture about the wrist or forearm, due to automobile cranking; direction of force, and its variation as a causation of different lesions produced; age; character of bones fractured as factor in prognosis and estimating loss of time in these injuries; reduction and treatment; when should they be released for duty; the cases in which there is bone shortening on the radial side, and result in a certain amount of deformity and function loss.
4. *The Necessity for an Immediate and Thorough Roentgenological Study of All Injuries to the Spine*—H. W. Chappel, M. D., 134 S. Norton Avenue, Los Angeles.
5. *Fractured Pelves, with Particular Reference to Dislocation of Sacro-iliac Synchondrosis*—Harlan Shoemaker, M. D., Marsh-Strong Building, Los Angeles.
6. *Physiotherapy Treatment*—Arthur R. Gould, M. D., 291 Geary Street, San Francisco.

   Standardization of treatment; surgical cases; diagnosis of (a) surgeon and (b) physiotherapist; time from injury to treatment; object of physiotherapy treatment; types of treatment; mention of uses in medical cases.
7. *Misuse of the Industrial Accident Fee Schedule*—Morton R. Gibbons, M. D., 350 Post Street, San Francisco.

   Fees charged and collected for similar services are not uniform; rebates; contracts; flat rates; under-charge; failure to apply modifying clauses for unusual service; forcing minimum fees; necessity for all physicians and surgeons to know proper charges and co-operate to collect them; function of California State Medical Society; clearing house or fee bureau to secure uniform charges; result will be enlarged panels, larger collections; decline of contract and salary practice.

TECHNICAL SPECIALTIES SECTION

Ray Lyman Wilbur, M. D., Chairman,
Stanford University, Palo Alto.

Charles T. Sturgeon, M. D., Secretary,
Merritt Building, Los Angeles.

FIRST MEETING

Hall No. 6 (Sentinel Dining Room), Monday, May 15, 2 p. m.

All members of the California Association of Physiotherapists; the California Association of Radiographers; the California Association of Medical Social Workers; the California Association of Dieticians; the California Association of Laboratory Technicians, and all other persons interested in the technical specialties are invited to attend this meeting.

1. Chairman's Address.
2. *The Technical Specialty Organizations*—Hartley F. Peart, General Counsel for the State Medical Society, Humboldt Bank Building, San Francisco.
3. Election of Section Officers.

SECOND MEETING

Hall No. 6 (Sentinel Dining Room), Wednesday, May 17, 10 a. m.

California Association of Physiotherapists

Hazel Furscott, President,
Hahnemann Hospital, San Francisco.

Florence E. Atkinson, Secretary,
29 Mosswood Road, Berkeley.

1. *Educational Standards in Physiotherapy*—Ray Lyman Wilbur, M. D., President Stanford University, Palo Alto.

2. *The Effect of Massage, Heat, and Exercise on the Local Circulation*—A. W. Hewlett, M. D., Lane Hospital, San Francisco.
3. *Early Physiotherapy Treatment of Fractures*—Walter I. Baldwin, M. D., Butler Building, San Francisco.
4. *The Standardization of Physiotherapy Equipment*—Miss Myrna Howe, Physiotherapy Technician, Butler Building, San Francisco.
   Classification and description of different types of equipment; reduction of equipment to that most successfully used and necessary for a physiotherapy department in:—an orthopedic surgeon's office engaged in private practice; an orthopedic surgeon's office engaged in private practice plus industrial work and in a hospital clinic.
5. *Physiotherapy Records*—Miss Hazel E. Furscott, Physiotherapy Technician, University of California Hospital, San Francisco.
   A working method of making physiotherapy records of progress; range of motion, graphic, mechanical; circumferential; strength; normal measurements and their variations. The value of adequate records to the patient, to the technician, to the physician. Statistics from these records and their possible contribution to physiotherapy and medicine.
6. Business Meeting.

THIRD MEETING

Hall No. 6 (Sentinel Dining Room), Wednesday, May 17, 2 p. m.

California Association of Medical Social Workers

Miss Eleanore Stockton, President, Board of Health, San Francisco.

Miss Edna J. Shirpser, Secretary, Children's Hospital, San Francisco.

1. *Child Welfare Centers Under Supervision of the Department of Public Health*—Miss Eleanore Stockton, Board of Health, San Francisco.
2. *Medical Social Service in the Hospital*—Miss Marguerite Wales, Stanford Medical School, San Francisco.
3. *The Relationship of Social Service to the Medical Profession*—Ray Lyman Wilbur, M. D., Stanford University, Palo Alto.
4. *The Place of Medical Social Service in Hospital Organization and the Duties of Medical Social Workers Toward Hospital Administration*—Frank R. Nuzum, M. D., Cottage Hospital, Santa Barbara.
5. Social and Economic Diagnosis—General discussion.
6. Business Meeting.

GENERAL MEDICINE SECTION

Joseph King, M. D., Chairman, Brockman Building, Los Angeles.

E. S. Kilgore, M. D., Secretary, 391 Sutter Street, San Francisco.

FIRST MEETING

Hall No. 2 (Church), Monday, May 15, 2 p. m.

1. Chairman's Address and Secretary's Report.
2. *Diphtheria—A Controllable and Preventable Disease*—W. W. Roblee, M. D., Riverside.
   Recent increase of diphtheria in California; report of control measures used at Sherman Institute Indian School, Riverside, in two epidemics from separate foci; experience with Schick test and toxin-antitoxin administration; relative importance of: (1) quarantine, (2) detection and elimination of carriers, (3) detection and elimination of non-immunes.
3. *Treatment of Hypertension*—D. D. Comstock, M. D., White Memorial Hospital, Los Angeles.
   Summary of known facts about hypertension; classification—symptomatic, essential or idiopathic. A study of the latter, with reference to diet and metabolism; evidences of organic and of functional factors; detailed outline of treatment for a case of essential hypertension, with discussion.
4. *The Surgical Treatment of Angina Pectoris*—Philip King Brown, M. D., Medical Building, San Francisco; Walter B. Coffey, M. D., Medical Building, San Francisco.
   The theory of angina and the problem involved. The resection of the cervical sympathetic system in part or whole. The work of Francois-Franck in 1896 on aortitis and the cervical sympathetic in relation to angina and his suggestion that sympathectomy be tried in the treatment. The work of Jaboulet and his pupils, especially Lariche, on the effects of destroying the sympathetic nerve supply to blood vessels. The operation for the relief of angina successfully done by Janesco in 1916. The report of cases operated on in the Southern Pacific Hospital with cardiograms, tracings and dissections.
   Discussion by A. W. Hewlett, M. D., Lane Hospital, San Francisco.
5. *Present Status of Quinidin Therapy*—A. W. Hewlett, M. D., Stanford Medical School, San Francisco.
   Quinidin sulphate for the purpose of restoring a normal heart rhythm in patients with auricular fibrillation. Mode of administration, results and dangers. Review of the literature and personal experiences.
6. *The Diagnosis and Treatment of Cardio-Vascular Conditions in Thyroid Disease*—William J. Kerr, M. D., University of California Medical School, San Francisco; George C. Hensel, M. D., University of California Hospital, San Francisco.
   The frequency of cardio-vascular symptoms and signs in exophthalmic goiter; the relative infrequency in toxic adenoma; the nature of the cardio-vascular changes; the methods of recognition of these abnormalities. Pre-operative and post-operative treatment illustrated with polygraph tracings and electrocardiograms.

SECOND MEETING

Hall No. 2 (Church), Tuesday, May 16, 2 p. m.

1. *Inflammation of the Bowels*—S. A. Livatte, M. D., Santa Ana.
   Retrospective; presumptive; negatively pathognomonic; some modern fallacies; entender la chanza; bibliography.
   Discussion opened by Saxton Pope, M. D., Butler Building, San Francisco.
2. *Is the Meltzer-Lyon Technic an Asset or a Liability*—Walter C. Alvarez, M. D., 177 Post Street, San Francisco.
   If it will help in the diagnosis and treatment of gall-bladder disease it is an asset. If failing in that, it fosters the tendency of physicians to waste the time and money of patients who should promptly be turned over to the surgeon, it is a liability. The method is founded on theory and not on fact. Recent observations tend to discredit the theory. Apparently the magnesium sulphate does not tend to empty the gall-bladder. The use of the tube is not necessary, as magnesium sulphate and other drugs will increase the flow of bile when given by mouth. A large proportion of diseased gall-bladders have no stones and a clear, sterile bile. The infection is in the wall. Cholecystectomy should be done before the patient becomes a poor surgical risk.
3. *Chronic Arthritis*—Leonard W. Ely, M. D., Stanford Medical School, San Francisco.
   Further studies on the great second type of the disease. Therapeutic applications and remarks on classification.
4. *Evidence of the Presence of Amebae in Bone Lesions of Arthritis*—Charles A. Kofoid, Ph. D., and

Olive Sweezy, Ph. D., University of California, Berkeley.

5. *Non-Dysenteric Amebiasis*—Alfred C. Reed, M. D., 350 Post Street, San Francisco.

Frequency of amebiasis. Common clinical association of symptoms with it. Rarity in California of dysentery as a symptom and frequency of constipation. Unreliability of references to amebae outside of gastro-intestinal tract in man. Question of amebae in liver and bile tract. Relation of amebae to non-infective (non-bacterial) bone lesions. Amebia gingivalis not pathogenic. Clinical relationship of arthritis deformans (type II Ely), and ameba. Treatment of amebiasis, and its difficulty.

Discussion by John V. Barrow, M. D., Investment Building, Los Angeles; Herbert Gunn, M. D., 350 Post Street, San Francisco.

THIRD MEETING

Hall No. 2 (Church), Wednesday, May 17, 8 p. m.

1. Election of Section Officers and Transaction of Section Business.

2. *The Treatment of Constipation*—R. Manning Clarke, M. D., San Marcos Building, Santa Barbara.

Hypertonic and atonic types, and interrelations of these. Etiology; role of cathartics, enemas, foods, psychic disturbances; symptoms-theories of toxic absorption or nerve irritation; treatment-avoidance of irritation from bulky food, cathartics, enemas, nerve strain; value of bed rest; medication.

3. *Associated Syphilis and Tuberculosis*—A. L. Bramkamp, M. D., Banning.

Prevalence of each disease separately; prevalence of the two in association; consideration of the pathology of the two diseases; primary and secondary syphilis and the effect of tertiary syphilis on the course of the other when in association; treatment of the two diseases when associated in the same individual.

4. *Intra Vitam Bone Marrow Puncture in Pernicious Anemia*—Ernest H. Falconer, M. D., Physicians Building, San Francisco.

Description of drill devised by L. M. Morris, M. D., for performing marrow puncture of long bones, also brief description of technique; in what way can this procedure be applied to study of pernicious anemia? Theories about pathology and bone marrow changes in pernicious anemia; lantern slides of actual smears of bone marrow from different types of cases of pernicious anemia; consideration of data obtained from cases of primary anemia where marrow puncture has been performed; discussion of problems opened for study by this method.

5. *Polycythemia Vera and Its Treatment*—Stewart V. Irwin, M. D., Dalziel Building, Oakland.

Résumé of 250 cases; definition; symptomatology; physical signs; blood picture; course of disease; errors in diagnosis; pathology and physiology; treatment based on experimental and clinical observations; radium, where and how used; benzol, its place in treatment; cases treated by newer method and results obtained.

6. *The Effect of Feeding Gliadin on the Growth of Carcinoma in White Rats*—R. A. Kocher, M. D., Timken Building, San Diego.

Recent experiments on normal growth in animals have established that growth is not proportional to the quantity of protein in the diet, but is rather dependent on the proportion of certain of the amino-acid constituents of the protein molecule. Chief of these so-called "growth amino-acids" is lysine. Lysine is not a requirement for the maintenance of the adult animal, but is purely a "growth-factor." The present experimental work is carried out on adult white rats with carcinoma, to determine what effect a diet adequate for maintenance of the host, but deficient in lysine, would have on the growth and metastasis of the tumor. Tables and curves of growth of the tumors and metastases in experimental and control animals will be shown.

FOURTH MEETING

Hall No. 1 (Convention Hall), Thursday, May 18, 2 p. m.

This meeting devoted entirely to tuberculosis.

1. *Periodic Variations in Basal Metabolic Rate in Tuberculous Patients*—Philip H. Pierson, M. D., Physicians Building, San Francisco.

Does a variation occur? If so, what relation does it bear to menstruation or other factors? Is there any relationship between this variation and the activity of the disease.

2. *Gastro-Intestinal Complications with Pulmonary Tuberculosis*—Wm. C. Voorsanger, M. D., 177 Post Street, San Francisco.

Regulated feeding as distinguished from simple overfeeding. Difficulties in feeding which arise from gastro-intestinal disorders, either functional or organic—e. g., anorexia, vagaries of appetite, distress after eating, nausea and vomiting, coughing during eating, abdominal pain, result of overeating, diarrhea, gastric or duodenal ulcer, colitis, appendicitis, intestinal tuberculosis. Differential diagnosis is to be discussed; and in connection with treatment the use of calcium clorid intravenously to combat anorexia and increased peristalsis.

3. *Experience with Thoracoplasty in Tuberculosis*—Ralph C. Matson, M. D., Portland, Oregon.

4. *The Sanatorium Treatment of Tuberculosis*—W. Jarvis Barlow, Security Building, Los Angeles.

Position occupied by sanatoria in the campaign against tuberculosis; sanatorium treatment as it was and is today; difficulties encountered. Why has sanatorium treatment not been more successful? Type of institutions of most value; results of cases treated; follow-up work.

5. *The Use of Opiates in Pulmonary Hemorrhage of the Tuberculous*—Charles A. Browning, M. D., Merritt Building, Los Angeles.

Discussion of the indications to be met by opiates in pulmonary hemorrhage; discussion of unfavorable influence of opiates on patients; immediate; morale; remote; pneumonia; opium habit.

PEDIATRICS SECTION

WILLIAM P. LUCAS, M. D., Chairman
University Hospital, San Francisco.

HUGH K. BERKLEY, M. D., Secretary,
Brockman Building, Los Angeles.

FIRST MEETING

Hall No. 3 (General Store), Tuesday, May 16, 8 p. m.

1. Chairman's Address and Secretary's Report.

Symposium on the Pirquet "Nem" System of Feeding.

2. *The Origin and Application of the Pirquet System of Child Feeding, Under the Hoover Relief Administration of Austria*—Herbert S. Coulter, M. D., 1949 Huntington Drive, Pasadena.

3. *The Reliability of the Sitting Height as an Index to Nutrition*—Harold K. Faber, M. D., Lane Hospital, San Francisco.

4. *The Pirquet System and American Requirements*—Wm. E. Carter, M. D., University Hospital, San Francisco.

SECOND MEETING

Hall No. 3 (General Store), Wednesday, May 17, 2 p. m.

Symposium on the Recently Prevalent Acute Infectious Diseases of the Nervous System in Childhood (Epidemic Encephalitis, Acute Polio-Myelo-Encephalitis).

1. *Epidemiology, Pathology*—William P. Lucas, M. D., University Hospital, San Francisco.
2. *Clinical Aspects and Differential Diagnosis*—Rachel L. Ash, M. D., University Hospital, San Francisco; Langley Porter, M. D., 240 Stockton Street, San Francisco.

General Discussion. Because of the importance of the subject, the papers will be thrown open at once for general discussion, so that the characteristics of these conditions may be fully considered by the members of the section.

THIRD MEETING

Hall No. 3 (General Store), Thursday, May 18, 2 p. m.

1. Election of Section Officers and Transaction of Other Section Business.

Symposium on Posture in Childhood.

2. *The Etiology and Treatment of Faulty Posture in Children*—John C. Wilson, M. D., Baker-Detwiler Building, Los Angeles.
3. *Posture as Related to Nutrition in Children*—Alfred Edward Meyers, M. D., 350 Post Street, San Francisco.
4. *Posture in Its Relation to Health*—Howard Markel, M. D., Butler Building, San Francisco.
5. *Physiotherapy in the Treatment of the Child with Rheumatic Infection*—Edith Bronson, M. D., 240 Stockton Street, San Francisco.
6. *Influence of the Eyes on Posture in Torticollis*—Percival Dolman, M. D., Flood Building, San Francisco.

Demonstration of methods of correcting postural defects will be given in connection with the above papers by Miss Gwendolyn Bovill, Physiotherapist, University Hospital, San Francisco.

NEUROPSYCHIATRY SECTION

WALTER F. SCHALLER, M. D., Chairman,
Medical Building, San Francisco.
W. B. KERN, M. D., Secretary,
Brockman Building, Los Angeles.

FIRST MEETING

Hall No. 4 (Operating Office), Tuesday, May 16, 8 p. m.

1. Chairman's Address and Secretary's Report.
2. *Constitutional Psychopathic Inferiority*—William House, M. D., Selling Building, Portland, Oregon.

   The term Constitutional Psychopathic Inferiority is applicable to a vast number of persons, possibly as many as 10 per cent of the total population. From this group are derived in all probability as many victims of the psychoneuroses and insanities as from the entire balance of the population. They furnish the recruits from whom not only neurological but general medical and surgical practice is drawn. The general types may be recognized, the one sluggish, dull and made up of people able to do fair work under certain restrictions, the other often incorrigible and easily led into criminal ways. Both types exert detrimental influences in school, social, military and industrial life. Etiologically hereditary and possibly endocrine deficiencies are influential. The recognition of these types has a profound bearing on medical, social and economic life and better understanding of them is of great practical as opposed to purely theoretical value.

   Discussion opened by Norbert J. Gottbrath, M. D., Flood Building, San Francisco.
3. *The Use of the Pupilloscope in Neurology*—Henry G. Mehrtens, M. D., Lane Hospital, San Francisco; Otto Barkan, M. D., 516 Sutter Street, San Francisco.

   Its possible use in syphilis without positive spinal fluid findings; in neuro-syphilis with positive findings; in arrested or burnt out neuro syphilis; in cases of doubtful diagnosis.
4. *A Study of the Relation of Low Basal Metabolism Rates to Fatigue States*—Roland S. Cummings, M. D., Pacific Mutual Building, Los Angeles.

   A review of 100 subjects having a basal metabolism rate of 10 per cent or below; a review of 50 subjects having a normal basal metabolism rate (between plus and minus 10); 33 per cent of cases with basal metabolism rates below normal had a clinical diagnosis of fatigue neurosis; 15 per cent of all subjects with normal rates had a clinical diagnosis of fatigue neurosis; only 5 per cent of patients with a low rate had normal endurance and normal energy; 50 per cent of all patients with normal rates had normal energy and endurance; a very small percentage of patients with normal rates complained of marked fatigue, while the majority of patients with a low rate did complain of marked fatigue, fatigue symptoms always being accompanied by general nervousness; a discussion of other signs of a hypothyroid state which were present in this group; a discussion of the causes of fatigue states and the general nervous symptoms in their relation to the causes of the low basal metabolism rate.
5. *The Alienist and Expert Testimony*—Edward Huntington Williams, M. D., Brockman Building, Los Angeles.

   A summary of the faults of existing methods of taking expert testimony; reasons for the attitude of the public; some reasons why a more rational system has not been adopted; some suggestions for a change for the better.
6. *Post Infectious Encephalitis; Report of the Treatment of a Group of Cases by the Intraspinous Injection of Their Own Blood Serum*—J. Ross Moore, M. D., 520 West Seventh Street, Los Angeles.

   Inadequacy of present methods of treatment; theoretical basis for the employment of the patient's own blood serum intraspinously; classification of cases treated; description of procedure; progress of the cases during treatment; conclusions.
7. *Diffuse Encephalitis*—R. W. Harvey, M. D., Butler Building, San Francisco; Glanville Y. Rusk, M. D., Hooper Foundation, San Francisco.

   A brief clinical record of a case; autopsy and pathological findings; description of slides made from sections of the brain; discussion of the case from the standpoint of diagnosis.

SECOND MEETING

Hall No. 4 (Operating Office), Wednesday, May 17, 2 p. m.

1. Election of Section Officers and Transaction of Other Section Business.
2. *The Genesis and Treatment of Insomnia*—Henry Douglas Eaton, M. D., Pacific Mutual Building, Los Angeles.

   A brief discussion of the common types of insomnia and their causes with particular emphasis on the so-called nervous insomnia; treatment and results based on ten years' experience with such cases.
3. *Post-Traumatic Neuroses; Their Treatment by the Method of Final Settlement and Closure of Litigation Features*—Joseph H. Catton, M. D., 209 Post Street, San Francisco.

   Consideration of "lump sum settlement and closure" of accident cases presenting psychoneurotic pictures. A comparison of this method of handling with "continuing awards" plus psychotherapeutic and other forms of medical treatment.

   Discussion opened by Charles L. Allen, M. D., Investment Building, Los Angeles.

4. *Suicide and Degeneracy*—J. T. Fisher, M. D., 537 S. Virgil Street, Los Angeles.

The lay belief that suicide is generally associated with insanity is not borne out by mental examinations of those who have attempted suicide. Many instances of strong and rational motivating factors. Discussion of the prevalency of suicide in California with presentation of data. Degeneracy will be discussed in relation to the many psychoses and criminal tendencies and to the problem of drug addictions.

5. *Epidemic Encephalitis*—Milton B. Lennon, M. D., Butler Building, San Francisco.

A study of 100 and more cases; frequent difficulty of early diagnosis; remissions in the disease; the very low percentage of recovery; how many ultimately merge into the Parkinsonian group.

Discussion opened by Richard W. Harvey, M. D., Butler Building, San Francisco.

6. *Dry Brain versus Wet Brain*—Cecil E. Reynolds, M. D., Title Insurance Building, Los Angeles.

Signs and symptoms of dry brain and of wet brain; period of apprehension and relative importance of these diphasic variations from normal balance; the application of these surgical lessons to non-operative neurological treatment; examples; posture during operations—(a) above tentorium, (b) below tentorium; posture after operations—(a) above tentorium, (b) below tentorium.

7. *Psychotic Sequelae of Epidemic Encephalitis*—Robert Lewis Richards, M. D., 240 Stockton Street, San Francisco.

Besides the recurrence of Parkinsonian syndromes, paralyses, and sleep disturbances usually noted, I have encountered a number of psychotic sequelae with a relatively recent history of epidemic encephalitis. Epilepsy, varied amnesic states, grades of dementia, psychoneurosis, migraine attacks and ocular disturbances have been noted. In a diagnostic way this is a vital fact particularly with reference to compensation. From a prognostic standpoint the outlook is different. The treatment will naturally be modified on this basis. So far there has been a tendency to associate epidemic encephalitis too exclusively with midbrain and lower orders of nervous structures. Besides the usual transitory toxic involvements of the cortex and meninges in different infections, we have in these cases more permanent and serious changes. Besides the history of the attack, the persisting ocular disturbances are the most reliable indications of this sequence. The personality or make-up of the individual of course plays a role.

GENERAL SURGERY SECTION

CHARLES D. LOCKWOOD, M. D., Chairman,
295 Markham Place, Pasadena.

EDMUND BUTLER, M. D., Secretary,
Butler Building, San Francisco.

FIRST MEETING

Hall No. 2 (Church), Tuesday, May 16, 8 p. m.

1. Chairman's Address and Secretary's Report.
2. *Amputations in the Region of the Knee Joint*—Howard H. Dignan, M. D., 275 Post Street, San Francisco.

Comparison of functional results in the different amputations; description of the Grith-Stokes operation and its modifications; post-operative treatment, physiotherapy, pylons, crutches.

3. *The Hemorrhoid Problem*—Sol Hyman, M. D., Butler Building, San Francisco.

Need for reviewing the subject; changing fashions in operations for piles; untoward results following the various procedures; post-operative complications; the anesthetic; choice of operation according to the criteria; simplicity, effectiveness, comfort, freedom from complications.

4. *Migratory Tumors of the Abdomen*—Asa W. Collins, M. D., 126 Post Street, San Francisco.

Differentiation between migration and metastasis; types of metastatic tumors; types of migratory tumors. Nature of migration; why certain migrate; leiomyomas (fibroids); echinococcus cysts; ovarian cysts. Diagnosis; previous history, clinical symptoms, physical findings; case report.

5. *Amoebic Abscess of the Liver*—Horace J. Brown, M. D., Goldfield, Nevada.

A brief résumé of the etiology, pathology, physical signs and diagnosis; report of a very unusual case; exhibit of X-ray plates taken before operation.

6. *Primary and Secondary Focal Infections in Arthritis Deformans*—Rea Smith, M. D., Merchants National Bank Building, Los Angeles.

We believe that to successfully treat a case of chronic arthritis, persisting after treating the head foci, that a gastrointestinal study both for mobility and motility of the ileocecal coil is essential. If the X-ray demonstrates a right-sided anomaly, that some intestinal operation to restore the function of the large bowel is the first step; that diet and medical treatment to restore the colonic flora to its normal balance is the second step; that orthopedic operation and manipulation on the tendons and joints to restore function is the third step; that joints that have become inflamed on manipulation before the removal of the intestinal focus will stand any rational procedure afterwards without damage.

7. *Tumors of the Breast Arising During Lactation and Pregnancy*—Alson R. Kilgore, M. D., 391 Sutter Street, San Francisco.

Comparative frequency of incidence of the various breast tumors during lactation and at other times. Studies of age of onset and period of pregnancy or lactation as aids in diagnosis. Study of incidence of cancer during pregnancy and lactation by ages of patients—the series studied suggests that as women pass 35 the percentage of incidence of cancer during breast activity rises very sharply. Study of prognosis of tumors, especially cancer, arising during lactation and pregnancy. Prognosis of cancer much more hopeful than usually regarded. Brief comment on treatment of breast tumors during breast activity.

SECOND MEETING

Hall No. 2 (Church), Wednesday, May 17, 2 p. m.

Symposium on Bowel Obstruction.

1. *Indications for and Results of Anchoring the Head of the Colon*—O. O. Witherbee, M. D., Pacific Mutual Building, Los Angeles.

Lowering and distention of head of colon, attended by kinking and angulation, favoring retention of food products, with resulting intoxication; bringing on periodic attacks of excruciating headache of a semi-epileptiform character. Relief secured by straightening and anchoring head of colon.

2. *Further Observations on Colocolostomy in Obstruction at the Splenic Flexure*—Andrew S. Lobingier, M. D., Merritt Building, Los Angeles.
3. *Bowel Obstruction, Diagnosis and Treatment*—Emmet Rixford, M. D., 1795 California Street, San Francisco.
4. *Some Observations on Intestinal Obstruction*—Harold Brunn, 350 Post Street, San Francisco.

General statistics; mortality rate higher than for any other acute abdominal condition; mortality varies with time of operation after onset; statistics gathered from U. C. surgical service. Clinical symptoms and signs; importance of early diagnosis; common erroneous conceptions in acute intestinal obstruction. What constitutes sufficient evidence to warrant immediate operative interference; discussion of experimental data on acute

intestinal obstruction; most acceptable explanation. Whipple's proteose intoxication theory; practical applications in diagnosis and prognosis; possibility of lowering mortality rate by proper use of this experimental data; some operative considerations.

5. *Bowel Obstruction Following Operations Occurring During Convalescing Period*—Alanson Weeks, M. D., 350 Post Street, San Francisco.

Etiology, functional, mechanical; diagnosis; treatment.

6. *Surgical Study of the Periarterial Sympathetic Fibres*—C. Latimer Callander, 516 Sutter Street, San Francisco.

Earlier work on perivascular sympathetic fibres by Jaboulay, Goyet, Potain and Teissier. Histological anatomy of peripheral sympathetic system; course along the arteries and veins in the vascular sheaths; newer aspects of vasomotor equilibrium. Symptoms of vasomotor origin; trophic changes in skin, nails, subcutaneous tissue and muscle; changes in bones and joints; thermic changes; secretory changes; technique of periarterial sympathectomy; post-operative objective reactions; primary vasoconstriction; pathological physiology; secondary reactions; hyperthermia of part distal; pathological physiology; description of recording apparatus; increased peripheral blood pressure; pathological physiology; description of apparatus; dilation of skin capillaries; description of apparatus; pathological physiology. Clinical pictures of possible altered vasomotor balance; traumatic reflex disorders of Babinski-Froment type; causalgia of Weir Mitchell; spontaneous ulcerations; partial or complete ischemic motor paralyses. Analyses of post-operative results in three cases; causalgia; Raynaud's disease; arteriosclerotic gangrene. Questions of future research in peripheral sympathetic system; data on post-operative increase in surface temperature; accurate ocular observations of skin capillary before and after operation; determination of blood pressure changes.

THIRD MEETING

Hall No. 2 (Church), Thursday, May 18, 2 p. m.

1. Election of Section Officers and the Transaction of Other Section Business.

2. *Adenomata of the Thyroid*—John Hunt Shepard, M. D., Growers Bank Building, San Jose.

Terminology and classification of goiter; confusion arising from lax and indiscriminate use of the terms "simple goiter," "colloid goiter," "adolescent goiter," "exopthalmic goiter," "toxic goiter," "nodular goiter" and "adenoma." Life history of adenomata of the thyroid; their probable origin; age incidence of appearance of adenomata; age incidence of appearance of symptoms; occurrence of degenerative changes. Thyroid intoxication from adenomata of the thyroid size of adenoma of little or no consequence; insidious onset; periodic exacerbations; degree of intoxication as measured by the metabolic rate; significance of blood pressure readings; cardiac strain; dangers of iodine therapy; enucleation or subtotal thyroidectomy the rational treatment.

3. *Analysis of Malignant Tumors of the Thyroid*—Clarence G. Toland, M. D., Pacific Mutual Building, Los Angeles.

Analysis made of the thyroid cases that were observed in the St. Vincent's Hospital in my service during the years 1920 and 1921. The observation revealed that malignancy existed in thyroid tumors more frequently than is generally supposed. A number of cases operated for benign tumor proved malignant on microscopic examination, showing the necessity for expert microscopic study of all thyroid tissue. The diagnosis is difficult, but can usually be made by: a careful complete history; physical signs, (a) nodular appearance, (b) firm non-elastic consistency, (c) sudden rapid growth of the tumor; symptoms as pain about head and neck, and loss of weight; several cases operated for malignant tumor proved to be merely a thyroiditis; all cases recur usually within one year. Treatment of malignant thyroid consists in complete removal as soon as diagnosis is made; many cases get into your hands too late for operation, then we resort to X-ray and radium; have seen good results under X-ray treatment in two cases; how long these people will live and be as comfortable as they are now is a question; it is an interesting fact how many cases of malignant thyroid in which the total removal of the thyroid has been done, no definite symptoms of hypothyroidism are produced. This is a strange fact.

4. *Compression of the Lung in Tuberculosis; Medical and Surgical Aspects*—Leo Eloesser, M. D., Butler Building, San Francisco; Philip King Brown, M. D., Medical Building, San Francisco.

Observations on the anatomy and physiology of the collapsed chest; changes in the chest wall, in the collapsed lung, in the mediastinum, in the opposite lung; changes in respiration; clinical observation of patients before operation; indications for operation; operations on the closed chest; on the empyematous chest; points of technique and after-care; case reports; demonstration of slides; results.

Discussion by Chelsey Bush, Arroyo Sanitarium, and Robert Peers, Colfax.

5. *The Diagnosis and Treatment of Surgical Lesions of the Chest*—Charles D. Lockwood, M. D., 295 Markham Place, Pasadena.

Introduction; surgery of the chest has made rapid strides since the war, heretofore considered a field where surgery was seldom justified, it is now almost as accessible as any other region. Factor which brought about this changed attitude; more accurate diagnosis by means of the X-ray and bacteriologic studies; the discovery that the chest cavity may be invaded without resort to cumbersome and complicated apparatus; improved technique. Lesions amenable to surgical interference; abscess of the lung, empyema, tumors, tuberculous cavities. Lantern slide demonstration.

6. *False Diverticulitis of the Sigmoid*—Stanley Stillman, M. D., Stanford Medical School, San Francisco.

Résumé of the pathology; possibility of its being the origin of annular carcinomata; presence of bladder symptoms as an aid in diagnosis; report of six cases.

7. *The Underlying Principles of Plastic Surgery*—J. A. Pettit, M. D., Selling Building, Portland, Oregon.

EYE, EAR, NOSE AND THROAT SECTION

FRANK A. BURTON, M. D., Chairman,
Watts Building, San Diego.

HARVARD MCNAUGHT, M. D., Secretary,
Butler Building, San Francisco.

FIRST MEETING

Hall No. 4 (Operating Office), Monday, May 15, 2 p. m.

1. Chairman's Address and Secretary's Report.

2. *Diphtheritic Otitis Media*—W. J. Mellinger, M. D., San Marcos Building, Santa Barbara.

Introduction;—Tonsillar infection with non-virulent diphtheria bacilli; acute infection of the middle ear with virulent diphtheria bacilli is infrequent; no statement regarding infection of the middle ear with non-virulent diphtheria bacilli; review of literature concerning these types of infection. Observation on eleven patients studied during the past two years, all of which had diph-

theria bacilli in pure culture in the middle ear; only one of these had a virulent diphtheria bacilli infection; method of testing for virulence; character of culture from the nose and throat in these patients; presence of diphtheria in the gums of one of these patients; outcome of treatment of certain of these cases in isolation hospitals; descriptions of treatment and results; conclusions.

Discussion opened by J. David Beatty, M. D., Baker-Detwiler Building, Los Angeles.

3. *Reflex Symptoms in Nasal Accessory Sinusitis*—Robert B. Sweet, M. D., Marine Bank Building, Long Beach.

Pain:—Nature, location, periodicity, obscurity; report of unusual cases.

Discussion opened by Hill Hastings, M. D., Trust and Savings Building, Los Angeles.

4. *Infection of the Petrous Pyramid in Mastoiditis*—Francis M. Shook, M. D., Oakland Bank of Savings Building, Oakland.

General discussion of occurrence of this type of infection; symptomatology of reported cases; pathology and bacteriology of reported cases; association of this infection with meningitis, brain abscess, thrombosis of the venous sinuses of the brain, general infection; report of author's case; demonstration of anatomy of condition; conclusions.

5. *Deafness and Vertigo in Industrial Accident Cases*—Harold Fletcher, M. D., Butler Building, San Francisco.

The importance of early and thorough vestibular tests and physical examinations; the difficulty of determining the industrial responsibility; methods of determining disability; report of cases.

6. *Acute Suppurative Parotitis: Recurrent Attacks*—H. J. Profant, M. D., Cottage Hospital, Santa Barbara.

Rarity of the condition; only a few cases in the literature; recurrent attacks especially rare; etiology; theories; duct infection, hematogenous infection, sympathetic (caeliac or splanchnic), toxin excretion; symptoms; female, age 62, parotid gland involved since childhood; between attacks gland does not evacuate spontaneously; chemical and bacteriological analysis of content; associated vaso-motor disturbances; intermittent rhinitis, bronchial asthma; acute suppurative parotitis with sudden onset, severe pain, stupor and delirium; methods of treatment; probing and catheterization of Steno's duct; conservative and radical procedures considered; expression of duct and gland with good recovery from acute attack; conclusions.

Discussion opened by H. W. Owen, El Centro.

SECOND MEETING

Hall No. 4 (Operating Office), Tuesday, May 16, 2 p. m.

1. Election of Section Officers; Transaction of Other Section Business.

2. *The Tabulation of Functional Hearing Tests*—Simon H. Jesberg, Investment Building, Los Angeles.

Studies of methods used by various American clinics and otologists; lack of uniformity in methods; impossibility of standardizing the various methods; description of the formula method adopted by the International Congress of Otologists; our experience with the method; plea of its adoption.

Discussion opened by I. H. Jones, M. D., 448 Arden Boulevard, Los Angeles.

3. *Sympathetic Ophthalmitis*—Delamere F. Harbridge, M. D., Phoenix, Arizona.

Discussion opened by Roderic O'Connor, M. D., 209 Post Street, San Francisco.

4. *A Plea for More Painstaking Work in Refraction*—L. A. J. La Motte, 5753 Melrose Avenue, Los Angeles.

Opportunity afforded by routine eye examination for detection of general disease; the value of certain steps preliminary to the actual refraction; a study of the relations of accommodation and convergence particularly as found in the presbyop.

Discussion opened by H. H. Walker, M. D., 850 Main Street, Riverside.

5. *Radium in the Treatment of Cataract*—Otis Allen Sharpe, M. D., 516 Sutter Street, San Francisco.

History of radium as a therapeutic agent; review of earliest work with radium and thorium in treatment of cataract; early methods of application of radium for cataract treatment, amount, frequency; work of Cohen and Levin; work and conclusions of Franklin; author's work and conclusion.

6. *The Differential Pupilloscope*—Otto Barkan, M. D., 516 Sutter, San Francisco.

New method for exact numerical determination of pupillary reaction and localization of lesion in the pupillary reflex arc; specially valuable in early diagnosis of tabes and cerebrospinal lues; presentation of instrument and résumé of application in ophthalmology with report of cases.

UROLOGY SECTION

George W. Hartman, M. D., Chairman,
999 Sutter Street, San Francisco.

Louis Clive Jacobs, M. D., Secretary,
Flood Building, San Francisco.

FIRST MEETING

Hall No. 5 (Auditor's Office), Monday, May 15, 2 p. m.

1. Chairman's Address and Secretary's Report.

2. *Diagnosis of Gonorrhea*—George W. Hartman, M. D., 999 Sutter Street, San Francisco.

Usual criteria for diagnosis; variations in gram staining; experiments in artificial propagation of the gonococcus; complement fixation.

3. *Diagnosis and Surgical Treatment of Tumors of the Kidney*—William E. Stevens, M. D., 210 Post Street, San Francisco.

Report of cases of carcinoma hypernephroma and papillomatous epithelioma of the kidney pelvis. Lantern slides illustrating the value of pyelography in the diagnosis of renal tumors.

Discussion opened by Louis C. Jacobs, M. D., Flood Building, San Francisco.

4. *Grave Renal Haematuria Due to Degenerative Changes in the Blood Vessels of the Papillae and the Pyramids, with a Report of a Case Requiring Nephrectomy*—Granville MacGowan, M. D., Brack Shops Building, Los Angeles.

Résumé of the anatomy of the renal papilla; pathological consideration of the haematuria due to: (a) varix of the papilla, (b) angiomas of the papillae, (c) tuberculosis of the papilla, (d) calculus incrustations of the papilla, and (e) cancer of the papillae. Differential diagnosis and its difficulties; no medical therapeutics. Surgical intervention when required; what to do; its chance of success.

Discussion opened by Frank Hinman, M. D., 516 Sutter Street, San Francisco.

5. *A Case of Bilateral Pyelitis Due to the Bacillus Pyocyaneus*—Chas. P. Mathe, M. D., Phelan Building, San Francisco.

An unusual kidney infection diagnosed through ureteral catheterization; case report; pathogenesis of B. Pysocyaneus in the genito-urinary tract; rarity of occurrence; a brief review of the literature; treatment and results.

6. *The Effect Upon the Kidney Following Ligation of the Ureter*—Anders Peterson, M. D., Brockman Building, Los Angeles.

A brief review of the experimental and clinical work where the effect upon the kidney has been studied following ureteral ligation; illustrations of specimens obtained from animals after various periods of time have elapsed between the time of ligation and the removal of the specimen; report of the results in 12 cases where the ureter was ligated in surgical procedures.

Discussion opened by Leon J. Roth, 512 S. Oxford Avenue, Los Angeles.

7. *Anatomical Studies of the Kidney*—Frank Hinman, M. D.; A. E. Belt, M. D.; B. M. M. Morrison, M. D.; R. K. Lee-Brown, M. D., 516 Sutter Street, San Francisco.

Renal anatomy as understood and taught in the ordinary text-book; methods of present study; injection and digestion; injection and stereopticon X-ray pictures; specimens rendered transparent by digestion of fat. Comparative anatomical studies; demonstration of specimen and lantern slides. Discussion and summary.

SECOND MEETING

Hall No. 5 (Auditor's Office), Tuesday, May 16, 8 p. m.

1. Election of Section Officers and Transaction of Other Section Business.
2. *Pre-Cancerous and Early Cancerous Lesions of the Genito-Urinary Tract*—J. R. Dillon, M. D., 516 Sutter Street, San Francisco.

Description and pathology of lesions of potential malignancy appearing in the genito-urinary tract; earliest signs and symptoms; diagnosis; prognosis; general statistics.

3. *Radium Treatment in Carcinoma of the Prostate*—R. L. Rigdon, M. D., 291 Geary Street, San Francisco.

Relative frequency of carcinoma as seen in 300 cases of enlarged prostate, observed at the Lane-Stanford Hospital; results of surgical treatments; results of surgery and of radium; technique of radium applications; dosage; case reports.

4. *Two Hundred and Twenty-three Consecutive Prostatectomies—Suprapubic and Perineal*—Robert V. Day, M. D., Baker-Detwiler Building, Los Angeles.

Functional results; structural results; mortality rate; subsequent state of general health; precautions requisite to obtain best results; dangers incident to operation and drainage.

Discussion opened by Herbert A. Rosenkranz, M. D., Story Building, Los Angeles.

5. *Is Syphilis Curable and May It Eventually Be Abolished?*—Victor G. Vecki, M. D., 516 Sutter Street, San Francisco.

The standpoint is taken that syphilis is a comparatively easily curable disease, and that by the use of improved methods of blood examinations and the so-called rhythmic treatment, and with the proper help of national, State and city governments, the scourge could be abolished.

6. *Studies in Ureteral Catheterization—Preliminary Report*—Henry A. R. Kreutzmann, M. D., 323 Geary Street, San Francisco.

Technic is to insert catheters for varying distances in both ureters and determine the amount of phenolsulphonephthalein obtained after intravenous injection from each catheter and from leakage into the bladder over a period of half an hour. The presence of pain, anuria and haemorrhage at the various levels is also determined.

Discussion opened by Lionel P. Player, M. D., 516 Sutter Street, San Francisco.

7. *An Anatomical and Embryological Study of the Perineum—Lantern Slides*—W. B. Wesson, M. D., Flood Building, San Francisco.

The material used consisted of 31 human embryos and dissections of fresh cadavers; the boundaries of the recto-urethralis muscle were determined and the reason for its value as a landmark in the perineal prostatectomy operation was ascertained; the development of the peritoneum of the pelvis was followed with particular reference to any part it might play in the formation of Denonvilliers fascia.

Discussion opened by Frank Hinman, M. D., 516 Sutter Street, San Francisco.

8. Urological Demonstrations—

(a) *A new apparatus for holding the Cystoscope during ureteral catheterization*—Louis Clive Jacobs, Flood Building, San Francisco.

(b) *Anatomical studies of the kidney*—Frank Hinman, M. D.; Elmer E. Belt, M. D.; Duncan M. Morrison, M. D.; R. K. Lee-Brown, M. D., 516 Sutter Street, San Francisco.

ORTHOPEDIC SURGERY SECTION

W. W. Richardson, M. D., Chairman,
Brockman Building, Los Angeles.
G. J. McChesney, M. D., Secretary,
Flood Building, San Francisco.

FIRST MEETING

Hall No. 5 (Auditor's Office), Tuesday, May 16, 2 p. m.

1. Chairman's Address and Secretary's Report.
2. *Old Bilateral Dislocation of the Patella*—Henry A. Ryfkogel, M. D., 516 Sutter Street, San Francisco.

Report of case with former unsuccessful operation on one side and successful operation on other side by the writer, with discussion of methods.

3. *Congenital Elevation of the Shoulders with Operation for Cure*—Arthur L. Fisher, M. D., Medical Building, San Francisco.

Frequency of condition; description of condition with symptoms and disability; causes; description of new operation for cure; result.

4. *Repair of Tendons in the Fingers*—Sterling Bunnell, M. D., 516 Sutter Street, San Francisco.

Atraumatic technique; essential; gliding mechanism; method of repair; free tendon graft; indication and contra-indication; after-treatment.

5. *The Treatment of Painful Affections Involving the Cervical Vertebrae*—H. L. Langnecker, M. D., Lane Hospital, San Francisco.

Group types; frequency of cases without bone pathology; predisposing causes, such as postural defects or occupational strains; the value of various methods of treatment, including rest; elimination of infectious foci; partial fixation; avoidance of strain; correction of defective posture; change of occupation; improvement of muscle tone; importance of active exercises.

SECOND MEETING

Hall No. 5 (Auditor's Office), Wednesday, May 17, 8 p. m.

1. Election of Section Officers and the Transaction of Other Section Business.
2. *Spastic Paraplegia—Moving Pictures of Two or More Cases Treated in Different Ways*—James T. Watkins, M. D., Medical Building, San Francisco.

Presentation of the orthopedic problem of Little's spastic paraplegia; avoids consideration of monoplegias and hemiplegias; there seems to be general agreement about the neural pathology; there is considerable consistent clinical evidence as to the cause; there is no disagreement as to the objective symptomatology; there is no disagreement as to the conservative orthopedic treatment to be followed, but there is radical divergence of opinion as to surgical courses of treatment to be followed. A comparison will be made of the reports of immediate brilliant results which at later examination proved to be disappointing; between forty and fifty cases are being traced throughout California. If they can be located in time their results will be reported; in the end an attempt will be made to interpret these conflicting data.

3. *The Modern Treatment of the Weak and Flat Foot*—George J. McChesney, M. D., Flood Building, San Francisco.
   Definitions; résumé of pathology and symptoms; old methods of treatment; fallacies; newer methods.
4. *Brisement Forces and the Pre- and After-Treatment*—A. Gottlieb, M. D., Consolidated Realty Building, Los Angeles.
   Forcible manipulation of joints with inhibited motion on account of various contractures has been practiced for many years past. It has fallen into disrepute because the results have not been gratifying and frequently mishaps have occurred. Failures should be attributed to the following factors which are discussed in this paper; these are: 1. Lack of pre-operative treatment; 2. disregard of contra-indications; 3, incorrect technic of the manipulation; 4. neglect of or inadequate after-treatment.
5. *Re-education of Crippled Children*—Charles G. Stivers, M. D., Auditorium Building, Los Angeles.
6. *Congenital Deformities*—Harry L. Schurmeir, M. D., San Marcos Building, Santa Barbara.

ANAESTHESIOLOGY SECTION

Mary E. Botsford, M. D., Chairman,
807 Francisco Street, San Francisco.

Eleanor Seymour, M. D., Secretary,
1329 So. Grand Avenue, Los Angeles.

MEETING

Hall No. 6 (Sentinel Dining Room), Monday, May 15, 8 p. m.

1. Chairman's Address and Secretary's Report.
2. *Post-Tonsillectomy Pulmonary Abscesses*—Mary E. Botsford, M. D., 807 Francisco Street, San Francisco.
   Incidence; diversity of opinion as to etiology; role of motor-driven anaesthetic appliances; comparative effects of general and local anaesthesia; light versus deep anaesthesia; danger of abolishing laryngeal reflexes; deductions from statistics.
3. *The Relation of Surgeon and Anaesthetist*—Saxton T. Pope, M. D., Butler Building, San Francisco.
   Dependence of the surgeon upon anaesthetist; obligations of surgeon to anaesthetist; co-ordination between stages of anaesthesia and stages of surgical procedure; what the surgeon can expect from the anaesthetist and what he cannot expect; surgical trespass over the bounds of anaesthesia.
4. *Organization of Hospital Anaesthesiology Department*—Caroline B. Palmer, M. D., 2401 Sacramento Street, San Francisco.
   Personnel; assignment of work; compensation; care of apparatus; supplies; anaesthetist's examination of patients before anaesthesia and choice of anaesthetic; anaesthetist's part in care of patients before, during and after anaesthesia; obstetrical anaesthesia and analgesia; instruction of students and training of anaesthetists; anaesthetic records and reports; résumé of department of anaesthesiology at Lane and Stanford University Hospitals for past fifteen years.
5. *Analysis of Anaesthetics Given in Eighty Consecutive Brain Operations at the University of California Hospital*—Dorothy A. Wood, M. D., University Hospital, San Francisco.
   Technique of administration; blood pressure findings in two types of cases: (a) cases showing marked increase in intracranial pressure, (b) cases showing slight increase in intracranial pressure; conclusions.
6. *The Clinical Uses of Oxygen*—Lorruli A. Rethwilm, M. D., 2215 Webster Street, San Francisco.
   Historical; increased use of late; oxygen in various anoxemias; oxygen with anaesthetics: (a) surgical, (b) obstetrical; observed benefits in our routine use of it.

Pacific Coast Association of Anesthetists

Joint meeting with the Section on Anesthesiology of the California State Medical Society.

George P. Waller, M. D., President,
Los Angeles.

Mary E. Botsford, M. D., Vice-President,
San Francisco.

Eleanor Seymour, M. D., Secretary-Treasurer,
Los Angeles.

Frank H. McMechan, Honorary Secretary,
Avon Lake, Ohio.

Walter R. Crane, M. D., Los Angeles.
Caroline B. Palmer, M. D., San Francisco.
Robert L. Charles, M. D., Denver, Colo.
Louis H. Maxson, Seattle, Wash.
Louise A. Oldenbourg, M. D., Oakland, Cal.
David E. Hoag, M. D., Pueblo, Colo.

FIRST MEETING

Hall No. 6 (Sentinel Dining Room), Tuesday Afternoon, May 16, 2 p. m.

1. *Spasticity from Inflammation in Relation to Anesthesia* (President's address, Pacific Coast Association of Anesthetists)—George P. Waller, M. D., Los Angeles.
2. *Time As An Element in Anesthesia in Children*—Mary T. Murphy, M. D., San Francisco.
3. *Anesthesia and Its Relation to the Patient, from a Surgeon's Standpoint; Type of Anesthesia and Its Relation to Existing Pathology; Emoluments to the Anesthetist*—Harlan Shoemaker, M. D., Los Angeles.
4. *Suggestive Leads in Anesthesia*—Frank H. McMechan, M. D., Avon Lake, Ohio.
5. *Sacral Anesthesia; A New Method of Administration with Report of Use in 400 Urologic and Gynecologic Cases*—Albert J. Scholl, Jr., Mayo Clinic, Rochester, Minn.

EXECUTIVE SESSION

If you have anything of constructive value to propose for the welfare of the specialty or of its associations, do not hesitate to present it at this session.

SECOND MEETING

Hall No. 6 (Sentinel Dining Room), Tuesday Evening, May 16, 8 p. m.

1. *Ethyl Chloride as a General Anesthetic*—Louise A. Oldenbourg, M. D., Oakland, Cal.
2. *Anesthol, a Most Useful Anesthetic Mixture*—Louis H. Maxson, M. D., President of the Society of Anesthetists, Seattle, Wash.
3. *The Physiological Effects of Nitrous Oxide*—Neil C. Trew, M. D., Los Angeles.
4. *Nitrous Oxide Oxygen Anesthesia in Infants*—Mary E. Botsford, M. D., San Francisco.
5. *Symposium on Intratracheal Anesthesia*—Mary Kavanagh, M. D., San Francisco; Edith Williams, M. D., San Francisco.

OBSTETRICS AND GYNECOLOGY SECTION

Harry M. Voorhees, M. D., Chairman,
Brockman Building, Los Angeles.

L. A. Emge, M. D., Secretary,
Stanford University Hospital, San Francisco.

FIRST MEETING

Hall No. 3 (General Store), Monday, May 15, 2 p. m.

1. Chairman's Address and Secretary's Report.
2. *Infection of the Placenta*—J. Morris Slemons, M. D., Pacific Mutual Building, Los Angeles.
   Bacterial infection of the placenta usually depends upon premature rupture of the membranes. The consequent diminution in the capacity of the uterine cavity with retraction of the uterine muscle disturbs the nutrition of the amniotic epithelium.

In this way its resistance to bacterial invasion is lessened. Through this portal organisms may gain entrance to the maternal circulation, a fact which explains the presence of fever during parturition. Even more frequently the fetal circulation is invaded. The resulting pathological lesions may be limited to a mild degree of inflammation of the umbilical cord, or at the other extreme, the fetus may suffer a general septicaemia, causing its death during labor or within a few days after birth. The prevention of placental infection merits consideration in determining the technique to be employed in the conduct of labor.

Discussion opened by Frank Lynch, M. D., University California Hospital, San Francisco.

3. *Cardiac Decompensation in Pregnancy and Labor*—Karl L. Schaupp, M. D., 516 Sutter Street, San Francisco.

Cardiac disease an individual problem with each patient during pregnancy and labor; the types of cardiac lesions met with in pregnancy and the resultant symptoms; the necessity of close supervision to forecast the probable effect of labor on the cardiac pathology; when does cardiac pathology require interference with pregnancy? Brief summary of clinical observations; conclusions.

Discussion opened by Armstrong Taylor, M. D., Butler Building, San Francisco.

4. *The Intermediate Cervical Repair Following Confinement*—Titian J. Coffey, M. D., Marsh-Strong Building, Los Angeles.

Introduction; causative factors; diagnostic points in cervical haemorrhage; character of cervical laceration; condition of cervix immediately following birth; condition of cervix on ninth day; technique of operation; advantages of operation; results six weeks following operation; conclusions.

Discussion opened by Alfred B. Spalding, M. D., Lane Hospital, San Francisco.

5. *A Biological Test for Pregnancy*—Merrill W. Hollingsworth, M. D., Anaheim.

Remarks on need of an easily applied biological test for pregnancy; is the slight glycosuria in early months of pregnancy renal or is it a true glycochemia? Work of Miss Grunthal; work and report of Kammitzer and Joseph; difficulties encountered in applying this test on our cases; slight modification made by us; presentation of statistics; summary.

Discussion opened by John Vruwink, M. D., Pacific Mutual Building, Los Angeles.

SECOND MEETING

Hall No. 3 (General Store), Tuesday, May 16, 2 p. m.

1. *Clinical Mistakes in Gynecological Diagnosis*—Roland E. Skeel, M. D., Title Insurance Building, Los Angeles.

Anatomical and pathological diagnosis more simple in diseases of the female pelvic organs than other diseases of the abdomino-pelvic viscera; imperfect examination or inadequate knowledge the reason for most gross errors in this class; gynecological disease classified for clinical purposes into: (1) those imperatively demanding interference, (2) those in which observation is desirable, (3) those whose effect upon the general health and the production of symptoms is likely to be unknown in the individual patient. Plea for a more conservative attitude towards the third class.

Discussion opened by Albert V. Pettit, M. D., Lane Hospital, San Francisco.

2. *Posterior Vaginal Drainage with Description of New Instrument Used as a Vaginal Pelvic Guide*—Frank R. Girard, M. D., Flood Building, San Francisco.

Treatment of acute pelvic inflammatory disease; indications for non-operative and operative treatment; choice of time for operation; indications for drainage; vaginal versus abdominal drainage; mechanics of pelvic drainage; choice of drainage material; description of new instrument to facilitate vaginal drainage.

Discussion opened by J. Craig Neel, 516 Sutter Street, San Francisco.

3. *Results of Five Years' Use of Radium in Gynecology*—Alice F. Maxwell, M. D., University Hospital, San Francisco.

Type of cases treated; method of application; results of treatment; comparison with results of surgery.

Discussion opened by Frank C. Ainley, M. D., Brockman Building, Los Angeles.

4. *Uterine Myomata and Their Treatment*—William H. Gilbert, M. D., Brockman Building, Los Angeles.

Prevalence of uterine myomata in middle-aged single women who have not borne children; fibroids and pregnancy; influence on conception, as cause of sterility, as cause of miscarriage and abortions; relationship of myomata to successful delivery of the pregnant woman. Degenerative changes; non-malignant, malignant changes in tumor, malignancy as complication. Treatment: radiation, its indications and range of usefulness, impossibility of preservation of sex glands. Surgical importance of early removal; all myomatous growths cause trouble in later life; surgical treatment given preference; preservation of sex glands possible by surgery; surgical procedure.

Discussion opened by Ludwig A. Emge, M. D., Stanford Hospital, San Francisco.

5. *Rational Glandular Therapy in Gynecology*—Arthur Lee Munger, M. D., Medical Building, San Francisco.

Endocrine therapy in general is an empirical procedure because the commercial products used are so extremely variable; the thyroid; the respective importance of its iodine versus its arsenic content; the ovary: a discussion of the commercial products and a theoretical explanation of the varying results in ovarian therapy; the pituitary body: the importance of the gland in the sex complex and the failure of the pituitary therapy; the question of uni- and poly-glandular therapy; the treatment of menstrual disturbances by glandular therapy remains the outstanding problem; glandular therapy and menopause; glandular therapy and infantilism.

Discussion opened by Frederick M. Loomis, M. D., 350 Twenty-ninth Street, Oakland.

THIRD MEETING

Hall No. 3 (General Store), Wednesday, May 17, 8 p. m.

1. Election of Section Officers and the Transaction of Other Section Business.

2. *The Technique and Organization of the Los Angeles Maternity Service*—Lyle G. McNeile, M. D., Pacific Mutual Building, Los Angeles.

General organization and object of the maternity service; maternity dispensary for pre-natal and post-partum care; method of keeping records; method of handling internes and students; technique of preparation of the room; preparation of the patient; examination; external, vaginal, rectal; treatment during labor; post-partum care; follow-up work; nursing care; end results.

3. *Pre-Natal Care in Private Practice Based on Last One Hundred Consecutive Cases*—Adelaide Brown, M. D., 909 Hyde Street, San Francisco.

Physical examination; pelvic measurements; routine Wassermann; hygiene of pregnancy; pre-natal visit; weight; blood pressure; urine examination; preparations for confinement; preparation for baby's care; pre-obstetrical examination at 7-7½ months; presentation and position; instruction about labor, child's routine, maternal nursing.

Discussion opened by J. Morris Slemons, M. D., Pacific Mutual Building, Los Angeles.

4. *Post-Natal Care*—Louis I. Breitstein, M. D., 350 Post Street, San Francisco.

The post natal period, a link in the chain of preventive medicine; the essential features of pre-natal and intra natal care so necessary for the success of post-natal care; puerperium with the routine care of mother and the new-born; follow-up system; the post-natal nurse; the importance of post-natal examinations.

Disenssion opened by Andrew J. Thornton, M. D., Timken Building, San Diego.

5. *The Treatment of Hyperemesis Gravidarum*—G. Carl H. McPheeters, M. D., Mattei Building, Fresno.

The purpose of this paper is to call attention to the common occurrence of various types of vomiting of pregnancy; it will concern itself mainly with mild or ambulatory and the severe or toxic types; it will take up the principle of treatment such as elimination, diet and medicines used; it will touch on the question of focal infection; in the severe type it will bring up also the question of interference with pregnancy as well as care after recovery; in the main, the paper is an earnest appeal for a more detailed attention to this common and often serious complication of pregnancy and gives a broad outline of the methods of treatment.

Discussion opened by Newell H. Bullock, Twohy Building, San Jose.

STATE MEDICAL SOCIETY MEETINGS

Year	Presidents	Place of Meetings
1856	E. F. Keene	Sacramento
1857	H. Gibbons	Sacramento
1858	A. B. Stout	San Francisco
1859	R. B. Ellis	Sacramento
1870	T. M. Logan	San Francisco (Incor. Nov. 1)
1871	T. M. Logan	San Francisco (March 1)
1871	T. M. Logan	Sacramento (Oct. 11)
1872	H. Gibbons	Oakland
1873	G. A. Shurtleff	Sacramento
1874	T. H. Pinkerton	San Francisco
1875	J. M. Browne	Sacramento
1876	A. B. Nixon	San Francisco
1877	Wm. Fitch Cheney	San Francisco
1878	Washington Ayer	San Jose
1879	H. S. Orme	San Francisco
1880	A. W. Saxe	San Francisco
1881	F. W. Todd	San Francisco
1882	G. G. Tyrrell	San Francisco
1883	L. C. Lane	San Francisco
1884	I. E. Oatman	San Francisco
1885	R. Bev. Cole	San Francisco
1886	W. P. Gibbons	San Francisco
1887	W. S. Thorne	San Francisco
1888	R. H. Plummer	San Francisco
1889	Jas. Simpson	San Francisco
1890	Walter Lindley	Los Angeles
1891	W. R. Cluness	Sacramento
1892	O. O. Burgess	San Francisco
1893	W. E. Taylor	San Francisco
1894	C. G. Kenyon	San Jose
1895	G. L. Simmons	San Francisco
1896	Wm. Le Moyne Wills	Los Angeles
1897	Henry Gibbons, Jr.	San Francisco
1898	Cephas L. Bard	Fresno
1899	Wm. Watt Kerr	Del Monte
1900	Geo. Chismore	San Francisco
1901	Thos. Ross	Sacramento
1902	Wm. J. G. Dawson	San Francisco
1903	F. B. Carpenter	Santa Barbara
1904	H. Bert Ellis	Paso Robles
1905	Frank L. Adams	Riverside
1906		
(Fire)	R. F. Rooney	San Francisco (one day)
1907	R. F. Rooney	Del Monte
1908	George H. Evans	Coronado
1909	W. W. Beckett	San Jose
1910	Jas. H. Parkinson	Sacramento
1911	Jno. C. King	Santa Barbara
1912	C. S. Stoddard	Del Monte
1913	O. D. Hamlin	Oakland
1914	F. C. E. Mattison	Santa Barbara
1915	————	A. M. A. Exposition, San Francisco—No State Meeting
1916	H. M. Sherman	Fresno
1917	George H. Kress	Coronado
1918	J. H. Barbat	Del Monte
1919	H. A. L. Ryfkogel	Santa Barbara
1920	J. C. Yates	Santa Barbara
1921	J. H. Graves	Coronado
1922	H. G. Brainerd	Yosemite Valley

FARES AND SERVICE FROM POINTS IN CALIFORNIA TO YOSEMITE VALLEY MEETING OF THE MEDICAL SOCIETY OF THE STATE OF CALIFORNIA, MAY 15 TO 18, 1922.

From San Francisco to Yosemite Valley and return.$19.50
From Oakland to Yosemite Valley and return..... 19.50
From Los Angeles to Yosemite Valley and return... 27.00

Good for 15 days from date of sale.

From San Francisco the train service will be as follows:

Santa Fe No. 2	Santa Fe No. 42	Santa Fe No. 22	S. P. No. 2	S. P. No. 24	S. P. Nos. 38-50	S. P. Nos. 84-90	Leave
8:00 p	4:00 p	9:00 a	11:00 p		4:00 p	8:40 a	San Francisco
1:26 a	8:50 p	1:50 p	4:50 a	8:30 p	9:18 p	1:15 p	Ar. Merced
	8:15 a	1:50 p		8:15 a		1:50 p	Lv. Merced
	11:55 a	5:55 p		11:55 a		5:55 p	Ar. El Portal
	12:00 p	6:05 p		12:00 m		6:05 p	Lv. El Portal
	1:15 p	7:15 p		1:15 p		7:15 p	Ar. Yos. Valley

From Los Angeles the train service will be as follows:

S. P. No. 9	S. P. Nos. 81-109	S. P. No. 109	S. P. No. 49	Leave
		10:00 pm	7:50 pm	Los Angeles
		12:40 pm	7:50 am	Ar. Merced
		1:50 pm	8:15 am	Lv. Merced
		5:55 pm	11:55 am	Ar. El Portal
		6:05 pm	12:00 m	Lv. El Portal
		7:15 pm	1:15 pm	Ar. Yos. Valley

The S. P. R. R. Co. and the A. T. & S. F. R. R. Co. will operate sleeping cars as follows:

S. P. Train No. 86, leaving San Francisco Ferry Station at 11:00 p. m. Car will be ready for occupancy at Oakland Pier after 9:00 p. m. and will be detached from train at Merced on arrival, so that occupants will not be obliged to vacate until just time enough to get their breakfast and depart from Merced on Yosemite Valley train at 8:00 a. m.

The A. T. & S. F. R. R. Co. will operate sleeping car service on their Train No. 2, leaving San Francisco Ferry Station at 8:00 p. m. These cars will also be detached from train at Merced and the passengers can occupy same until time to leave in the morning.

From Los Angeles the S. P. Company will operate sleeping cars on their Train No. 49, leaving Los Angeles at 7:50 p. m. and arriving at Merced at 7:50 a. m. and connecting with Yosemite Valley Railroad train to El Portal and Yosemite Valley.

The sleeping car fares will be as follows:

San Francisco to Merced—lower berth.....$3.00
Los Angeles to Merced—lower berth..... 3.75

Reservations for berth, compartment or drawing-room in sleeping cars should be made to the nearest agent of the railroad over which you desire to travel. Railroad tickets should also be purchased from those agents, who will be in position to give any additional information in regard to train service.

All drivers of Yosemite Transportation System automobiles will be instructed to assist doctors coming into the Valley in automobiles in every way. If they are having trouble of any kind and a Y. T. S. automobile is coming along, the driver will do everything he can to assist them in every way and, if not possible to repair automobile so that journey can be resumed, will carry word to the next telephone station and arrange for necessary help.

Plenty of oil and gasoline should be taken before leaving main highway, as service stations are few and far between. Water, of course, is available most any place.

1922 MEMBERSHIP IN THE STATE SOCIETY

If your 1922 membership dues are unpaid, this is the last issue of the Journal you will receive until you have again been restored to good standing.

STATE SOCIETY

PROCEEDINGS OF THE SECOND ANNUAL CONFERENCE BETWEEN THE COUNCIL OF THE STATE SOCIETY AND OFFICERS OF CONSTITUENT SOCIETIES

This conference was held in San Francisco on September 24, 1921. There will be two similar conferences held during the state convention in Yosemite May 15 to 18 as shown elsewhere in this issue of the Journal. The resolutions endorsed and passed for two similar conferences are here reprinted from the Journal of November, 1921, as a basis for consideration of further meetings.

1. **Monthly Report of County Secretaries:**
RESOLVED, That the Council of the State Medical Society and the officers of constituent societies meeting in joint session unanimously endorse and approve the program of monthly reports by secretaries of constituent societies to the State Society. It is to the best interest of medicine for the public and the profession that these reports be forwarded every month and made as complete as possible, regardless of whether the society holds a meeting or not.

2. **Constituent Society Representation at the State Meeting:**
RESOLVED, (a) That the Council of the State Medical Society and the officers of constituent societies, meeting in joint session, unanimously endorse and approve the policy of the State Society's including in the program of annual meetings arrangements for one or two joint meetings between the council and the officers of constituent societies as part of the official program. It is understood that this will necessitate the presence at each State meeting of the officers of each constituent society in an official capacity;
(b) That care be used in the selection of delegates and alternates of constituent societies to the State meetings, so that the House of Delegates may be truly representative; and that it be interpreted as a most important public duty for the delegates and alternates to attend the State meetings; and
(c) That, whenever the officially elected delegates and alternates fail to attend the State meeting for any legitimate reason, the president or secretary of the society, who will be present in another official capacity, may act as delegate.

3. **Change of Officers:**
RESOLVED, (a) That this joint meeting go on record as unanimously in favor of a policy that will insure, as far as may be, a fair degree of permanency in the secretary's office of constituent societies. To this end, it is our opinion and our recommendation that constituent societies select their secretaries with the greatest care and that frequent changes in this office be avoided.
(b) In order further to secure consecutive policy in the constituent societies, we recommend that all constituent societies elect in addition to the secretary an assistant secretary, who shall be an understudy to the secretary and who for any legitimate reason shall assume the duties of secretary.

4. **Training of Officers for Medical Organization Purposes:**
(a) This body unanimously recommends that the State Society prepare an adequate outline of the duties of president, vice-president and secretary-treasurer of constituent societies, and that the state secretary be requested to present this program at the next meeting of this joint body for consideration.
(b) In order that officers of the State and constituent soiceties may serve their purpose in the most useful way, we recommend that it be part of the official duty of officers of constituent societies when in San Francisco to visit the state offices for the discussion of special problems peculiar to our organization.

5. **Stated Meetings of the State and Constituent Society Officers:**
RESOLVED, That this body unanimously endorses and approves the policy of definite meetings of state and constitutent society officers as follows: One or two meetings at and during the annual meeting and one midyear meeting, to be held alternate years in Los Angeles and San Francisco.

6. **Program Arrangements for Constituent Societies.**
RESOLVED (a) That each constituent society prepare and execute each year one special program; that this program be sent to the state secretary, who will give it publicity, with the hope that it will be taken in toto as the program of another society;
(b) That the program committee of the State Society be requested to prepare and issue to all societies one or more uniform programs, to be discussed at the same monthly meeting by every society in the state. These programs should relate to subjects of importance to all members of the profession;
(c) That it be understood to be a duty of the councilor for each councilor district to visit at least one meeting a year of each constituent society within his district; and that he, in the discharge of this duty, should arrange with the secretary of the society to be visited for the program for that particular meeting; provided, that each councilor report on the execution of this part of the program at the state meeting;
(d) That the policy of a certain number of open meetings for each constituent society is approved and recommended. In the opinion of this body each constituent society should hold not less than one nor more than three open meetings a year, to which the general public shall be invited and which may or may not include speakers not medical men. In our opinion programs of this character should have the approval of the state program committee before being given;
(e) That the county program committee should seriously consider, at least in small counties, variations in the location of the meeting place, using different towns in the county for different meetings, and often in smaller places holding the meetings at the residences of individual members;
(f) Joint meeting of more than one society. This body approves as good policy an occasional joint meeting between small groups of constituent societies suitably located for this purpose. Programs at these meetings may be held either by one society, with the other societies as guests, or arrangements may be made for a combined program in which each of the societies of the group shall be interested;
(g) That the program committee of the State Society, under the chairmanship of the secretary, be used as a clearing house for all program work of constituent societies throughout the state; that it be interpreted to be a duty of the state and local secretaries to confer by correspondence or otherwise in making plans for advance programs; and that each constituent society have a list of programs as far as possible in advance of the meetings.

7. **Extension Work of the State Society:**
RESOLVED, That this body endorses and approves the idea of the State Society's developing and maintaining an extension program that will provide a list of available subjects and speakers, from which local program committees may select and extend invitations as they desire.
RESOLVED, That we urge and recommend that this extension program be expanded to include clinics, lectures, research work, etc., in the larger centers this program to be arranged in short all-day courses of from one to four weeks each, beginning and ending upon definite dates.

8. **County Editors:**
RESOLVED, That this body recommend to the Council: that the present system of county associate editors for the State Journal be discontinued, and that instead the secretary of each constituent society ex-officio act as editor for his county or district.

REPORT OF THE BOARD OF MEDICAL EXAMINERS

The Board of Medical Examiners of the State of California held a regular meeting in Los Angeles February 13 to 16.

Some seventy-seven applicants appeared for the written examination, of which approximately seventeen holders of drugless practitioners' certificates qualified for the six subject advanced examination for a physician and surgeons' certificate. Eleven graduates of various drugless and chiropractic schools, including the Western School of Chiropractic, California School of Chiropractic, National School of Chiropractic and Los Angeles School of Chiropractic, wrote the examination for a drugless practitioner's certificate and twelve Japanese midwives wrote the examination for a certificate to practice midwifery.

The board endeavored to bring this examination to the attention of those graduates of chiropractic schools now practicing in California in violation of the law, hoping that a larger number than wrote the examination would be able to fulfill the statutory requirements for admission to examination, i. e.:

1. A California high school education or its equivalent.

2. Two thousand hours' education in subjects specified in the Medical Practice Act covering a period of two terms of thirty-two weeks each.

3. A diploma from a legally chartered teaching institution, giving the required course of instruction.

4. Satisfactory evidence of good moral character.

The chiropractic organization promoting the publicity for the initiative, which will appear on the ballot at the next November election, whereunder it is proposed to create a separate chiropractic board with provisions for the wholesale licensing of those now practicing chiropractic in California, waged an active campaign to intimidate the qualified chiropractors so that they would be fearful of filing an application with the Board of Medical Examiners.

A considerable number of physicians and surgeons licensed in other States qualified for direct reciprocity certificates, while some thirty-five or more successfully passed the oral examination, as required under Section 13, of those who base their application on a certificate issued by some other state prior to August 1, 1901. Reciprocity certificates were also issued to a number of graduates of osteopathic schools who presented a license issued by some other state or territory of the United States, fulfilling the statutory requirement under Section 13.

Eight of those licensed to practice osteopathy in the State of California availed themselves of the opportunity offered under Secton 12½ of the Medical Act. All successfully passed the oral examination required thereunder and will be issued a physician and surgeon certificate.

The usual number of legal hearings were held and resulted in the revocation of the licenses of Jacob L. Arbogast,* M. D., Sacramento, and Lawrence S. Bartlett, M. D., San Francisco, both charged with violation of the State Narcotic Act; Charles E. Marsh (Naturopath), San Diego, and Frederick N. Staples, M. D., Los Angeles, both charged with performing an illegal operation; Holmes F. Troutman, M. D., Oakland, now incarcerated in San Quentin Prison, had his license revoked on the record of his conviction for a crime involving moral turpitude. The license of Charles E. Brown, M. D., Fresno, was suspended for a period of one year on a charge of violation of the State Narcotic Act. The board restored the license of Robert Allen Woods, D. O., which was revoked at the February (1921) meeting on a charge of violation of the ninth subdivision of Section 12.

Those licentiates who plead guilty to a charge of violation of the State Pharmacy Act in connection with dispensing or selling narcotics often claim they have no knowledge that such a plea establishes grounds for the revocation of their license issued by the Board of Medical Examiners, hence it is advisable to give this fact as wide publicity as possible.

The results of the written examination show the following applicants passed the examination:

1—For Physician's and Surgeon's Certificate—Elizabeth Blake, Georgia M. Clark, George H. Cook, Curtis E. Decker, Robert J. Dixon, Frederick D. Facey, Thomas R. Haig, James M. Huston, Joseph Jelinek, Winifred W. Jenney, Harry M. Kanner, Benjamin Katz, George M. Landrock, Mary L. LeClere, Ernest G. Motley, Gerald K. Nider, B. C. N. O'Reilly, Evangelin N. Percival, Abilio G. Das. Reis, Herman F. Rey, John M. Schmoele, B. V. Scott, Kenneth E. Smiley, Edwin C. Sorensen, Wm. McLean Thomas, Bion S. Warner, Leonard Woods.

2—For Drugless Practitioner's Certificate—Hannah L. Cater, Rowland H. Frazier, Alfred Harlow, Myrtle S. Johnson, Simon L. Nord, Joseph A. Sanford.

3—Certificates were also granted applicants on Government credentials (Section 12) as follows: Royal R. Baronides, James D. Bobbitt, Harvey R. McAllister.

The next regular meeting will be held in Native Sons' Hall, San Francisco, June 26 to 29, 1922, with the annual meeting scheduled at the State capitol, Sacramento, October 16 to 19, 1922.

The annual report of the Secretary-Treasurer covering the various activities of the board for the year 1921 will be published in the forthcoming issue of the Directory of those licensed under the Medical Practice Act of the State of California.

* Revocation set aside at April, 1922, meeting pending rehearing at June, 1922, meeting.

COUNTY SOCIETIES

Alameda County Medical Association (reported by C. L. McVey, secretary)—The March meeting was held March 20 at the Public Health Center. Rabbi Coffey addressed the meeting regarding the revision of the "Marriage Law" in the state of California. Rabbi Coffey's remarks were discussed by the members and suggestions were made that the society consider the advisability of endorsing the proposed changes in the law.

Henry Petray addressed the meeting in regard to a new physicians' and dentists' office building to be located in Oakland.

Rothganger presented a case of fracture of the leg, complicated with a brachial plexus, palsy or Klumpke paralysis.

Hayward Thomas read a paper on the new surgical treatment of acute mastoiditis. He also considered the question of removal of tonsils and adenoids during the period of acute inflammation.

Nutting read a report of the eye findings in fifty consecutive cases of influenza.

McNaught read a paper on the relations of laryngology, rhinology and otology to general medicine.

S. F. Worswick spoke upon the methods used in the manufacture of clinical thermometers.

Fresno County Medical Society (reported by Thomas F. Madden, secretary)—The evening of March 25 was spent with the State Secretary as our guest, and those members who were absent will never know how much they missed. By all of those present it was voted the most instructive meeting we have ever attended. More of such gatherings are sure to follow and the Council of the State Society is to be highly commended for instituting this character of extension work.

The regular April meeting was held in the Commercial Club on April 4 with the following members present: G. W. Walker, McKinney, Robinson, Ransom, Steinwand, Brown, Miller, Stein, Vanderburgh, Pettis, Aller, McConnell, J. R. Walker, Barrett, Ellsworth, Cross, Cowan, Morgan, Schiro, Tupper, Collins, Schottstaedt, Trowbridge, Divanovich, Manson, Lamkin, Jorgensen, Robbins, Staniford, Tillman, Bell; McNamara of Bakersfield. Paine of Exeter and Dearborn of Madera.

Emmet Rixford of San Francisco discussed the subject of gastric and duodenal ulcers and carcinoma, including symptomatology and treatment with special reference to gastrectomy and gastroenterostomy. Rixford's paper was discussed by Pettis, Staniford, Cross and G. W. Walker.

Clinical cases were presented by D. H. Trowbridge.

On Tuesday evening, April 11, the regular meeting of the staff of the Fresno County Hospital was held at the hospital. T. Floyd Bell presented a paper on neuro-syphilis. The eye signs were discussed by T. F. Madden.

Glenn County Medical Society (reported by C. L. Terrill, secretary)—The society met at the Willows Sanitarium on March 21. Officers were elected for the year 1922 as follows: Etta Lund, president; C. L. Terrill, secretary-treasurer; delegate to State meeting in Yosemite, Etta Lund, with T. H. Brown, alternate.

J. L. Rawhauser of Willows has been appointed city health officer for 1922.

Madera County Medical Society (reported by Ray R. Dearborn, secretary)—This new society took the preliminary steps in organization at a meeting on March 28 in Madera. The secretary of the State Society was present and presided at the meeting. Dow H. Ransom was elected president; G. G. Hawkins, vice-president; Ray R. Dearborn, secretary-treasurer; C. L. A. Rinker, Smith A. Quimby and George G. Hawkins, members of the advisory board. Ransom was also elected delegate to the State meeting. Charter members in this youngest society are: John Allen and E. B. Allen of Raymond, and G. G. Hawkins, C. A. Robinson, C. L. A. Rinker, Smith A. Quimby, L. J. Calahan, Mary R. Butin and D. H. Ransom of Madera.

The society tentatively adopted the ideal constitution and by-laws for county societies as approved by the A. M. A.

Merced County (reported by Brett Davis, secretary)—The March meeting was held in the office of Brett Davis, the secretary, on March 28. Max Rothschild of San Francisco gave a talk, illustrated with lantern slides, on "Tuberculosis: Its Treatment with Partial Antigens." Rothschild divided tuberculosis into two classes: exudative and productive. These can be differentiated not only by physical examination, but by their reactions to injections of old tuberculin. The exudative type gives a slow reaction, lasting up to two weeks, with fever, while in the productive type the reaction is much more rapid and fever lasts only a few days. The speaker showed lantern slides illustrating the definite therapeutic value of artificial pneumothorax and also of the promising results of treatment by partial antigen.

The secretary of the State Society held an informal conference with the members of the society on matters pertaining to the welfare of medicine for the public and for the physicians.

San Bernardino County Medical Society (reported by E. J. Eytinge, secretary)—The April meeting of the society was held in Redlands on the 4th with 25 members and 10 visitors present and 45 members absent. Alfred R. Roos was elected to membership and L. P. Barbour resigned. E. J. Eytinge read a paper on "Diversion of the Urinary Stream in Cancer of the Bladder," which was discussed by L. M. Coy. Henry Snure of Los Angeles presented the subject of "Pyelograms—Exhibition of Plates and Discussion of Their Interpretation and Value," discussed by Frank Folkins. A. B. Cecil of Los Angeles presented the subject of "One Hundred Consecutive Perineal Prostatectomies: a Critical Review." Discussion was opened by E. J. Eytinge.

The secretary's office is making strenuous efforts to enroll every eligible physician in San Bernardino as a society member.

San Diego County (reported by Robert Pollok, M. D.)—Recent meetings of the San Diego County Medical Society have been featured by the following papers: First: Renal Stone in a Lone Functioning Kidney, with report of case—L. H. Redelings, M. D. Second: Progress in Pediatrics—A. J. Thornton, M. D. Third: Appendicitis in the Female—H. P. Newman, M. D.

The Southern California Medical Society held its sixty-sixth semi-annual meeting in San Diego, on Friday and Saturday, April 7 and 8. The program was one of unusual excellence, and the spirit pervading the discussions in this society is extremely commendable. Every section of the country needs just such a society as this to offset the disadvantages of too much sectionalism in the program.

The medical library, true to library traditions, is finding it necessary to build in further bookstacks. The second quarterly meeting of the board of directors of the library was held in the library rooms on Monday, April 10.

The San Diego Society is planning a liberal representation at the Yosemite meeting of the State Society in May.

San Francisco County Medical Society (reported by LeRoy H. Briggs, secretary)—There were three meetings during the month of March. The general meeting on Tuesday, March 14, was devoted to discussion of the various aspects of appendicitis by I. S. Ingber, H. P. Hill and J. F. Cowan. The meeting on Tuesday, March 21, was the monthly meeting of the section on industrial medicine. At this meeting papers were read by C. L. Hoag, Sterling Bunnell, and J. M. Hamblin. The meeting on Tuesday, March 28, was by the section on eye, ear, nose, and throat. Papers were presented by E. C. Sewall, J. A. Bacher, A. J. Houston, J. H. McClelland, and W. F. Blake.

The San Francisco Hospital Colloquia (reported by Julian M. Wolfsohn).

1. **Tabes Dorsalis with Gastric Crises Complicated by Gastric Ulcer**—The patient, a woman, 36, was operated two and one-half years ago for gastric ulcer. The symptoms preceding operation were pain in the epigastric region, severe after meals and accompanied by vomiting of blood. The diagnosis was supported by X-ray findings and confirmed by operation.

On January 15 the patient again complained of epigastric pain extending down and around the abdomen to the back and accompanied by continual vomiting, nausea, retching. This attack had continued for two weeks at the time of the examination.

Examination disclosed Argyl Robertson pupils, anisocoria, left pupil smaller than the right. The gait was normal with the eyes closed. No Rombergism, but there was slight unsteadiness in walking backwards. No ataxia. Cranial nerves negative aside from the Argyl Robertson pupils. No analgesia in the distribution of the fifth nerve about the top of the nose. Motor system normal.

There was paraesthesia around the abdomen with pain in the pit of the stomach; analgesia from the first cervical segment below; no tactile anaesthesia; no disturbance of joint sense of big toes, diminished vibratory sense, and diminished deep sensibility; cerebro spinal fluid chemical and cytological tests negative; Wassermann x x; X-ray showed patent jejunum.

2. **Tabes Dorsalis with Ataxia**—An actor, age 46, more or less a drinker of spirits, was well until four years ago, when he suddenly became weak in his knees and fell to the ground. Upon regaining his feet he found that he staggered, and since that time has been unable to walk steadily.

No history of lancinating pain since the onset: but has had considerable painful tactile sensation over the body, worse in the lumbar region, spine, fingers, and feet. For three years has had diplopia and obstinate constipation has been present.

Examination shows marked sluggishness of both pupils to light; good accommodation; knee jerks sluggish; left ankle jerk absent, the right just obtained; no tenderness of calves to pressure; touching the skin very lightly in any part of the body causes considerable dysaesthesia in the form of painful sensations. There is no anaesthesia, but disturbance in the joint sense of the big toe: gait markedly ataxic; marked muscular hypotension; advanced Rombergism; more ataxia in the lower limbs than in the upper limbs; cerebro spinal fluid negative to chemical and cytological tests: Wassermann negative.

3. **Discussion**—The patient with gastric crises is especially interesting, because the association of gastric ulcer, which has been proved by operation, and gastric ulcer is extremely rare. Recent X-ray taken during the attack showed a spastic condition of the stomach with no other abnormality than the opening into the jejunum which was made during a previous operation.

The character of the pain, vomiting, and nausea; the fact that there were girdle sensations with the analgesia around the trunk, and especially the presence of a hyperalgesic zone to pressure just to the left of the fifth dorsal spine relegated this disturbance to the role of a gastric crises.

The attack lasted two weeks and then subsided completely. It is also intresting to note that gastric crises are usually not attended by much ataxia. This patient demonstrated the fact very well. The extent of analgesia is also worth noting because practically the whole body above the upper cervical segment is devoid of pain sensibility.

The second patient illustrates another tabetic condition. Very marked ataxia, but no lancinating pains, gastric crises, or girdle sensation. There was some disasthesia with loss of deep muscle sensibility resulting in clumsiness of movement and ataxia. Richter found, after examining a very large number of these cases histologically, that the area Nageotte was invaded by embryonic granulation tissue in which was found the living spirochaete. The pia-arachnoid protecting more fully the anterior root than the posterior root, rendering the latter more vulnerable to the toxins elaborated.

Degeneration within the spinal cord, and the posterior root zones is because there is no regeneration of the myalin in degenerating nerve fibers within the spinal cord due, most probably, to the absence of the sheath of Schwann.

San Luis Obispo County Medical Society (reported by G. David Kelker, Paso Robles)—The March meeting of the society was held at the Hotel Paso Robles March 9. After a very enjoyable dinner, Dr. Musgrave, secretary of the State Medical Society, presented to the members and guests some of the problems of the medical profession as a whole, and discussed in an informal conference way the local problems in hospitals, medicine, and public health of San Luis Obispo County.

March 10 was devoted to hospital work in Atascadero and San Luis Obispo, and another meeting of the county society was held in the latter city on the evening of the 10th.

The officers of the society for the year 1922 are Byron Y. Miller, president; Charles P. Proudfoot, vice-president, and G. L. Sobey, secretary-treasurer.

Santa Barbara County Medical Society (reported by V. C. Soper, secretary)—There were meetings of the society on March 11 and March 27, both meetings being held at the Cottage Hospital. At the meeting on March 11, W. E. Musgrave, secretary of the State Society, discussed the important problems confronting the medical profession. The meeting was essentially an informal question and answer conference, and many subjects of vital importance to the profession as a whole and to the local medical men in particular were discussed.

At the meeting on March 27, W. D. Sansum presented a paper on "Dietary Management of Nephritis." H. L. Schurmeier's paper was on "Congenital Deformities."

On Monday evening, March 20, many members of the society attended the lecture by Mr. Harold Bayne on "The Truth About Vivisection."

Santa Clara County Society (reported by E. P. Cook, secretary)—The March meeting of the society was held at the Santa Clara County Hospital on March 15, with about forty members present. Doxey Wilson spoke briefly of the growth of the County Hospital and showed graphic charts representing the growth of the hospital and the clinic, with the distribution of cases and ages of patients admitted.

Mr. A. B. Wastell, executive secretary of the San Jose Hospital, spoke briefly regarding the local hospital day to be held on March 20, on which date ground was to be broken for the new San Jose Hospital.

J. B. Bullitt presented a child with a large vascular nevus on the body which he was treating by means of X-ray and radium.

Frederick Curtiss discussed the technique of mandibular injection, with its resulting area of anesthesia.

Louis Boonshaft discussed artificial pneumothorax, at the same time demonstrating the method on a patient.

Doxey Wilson presented a patient whom the members of the society saw one year ago, shortly following the removal of a large portion of the large intestine and a small portion of the small intestine.

George A. Gray read a paper on the non-surgical drainage of the gall-bladder and demonstrated the method.

E. P. Cook discussed the various uses of the puncture of the longitudinal sinus in infants and demonstrated the method of obtaining blood via this route.

Stanislaus County (reported by R. E. Maxwell, secretary)—R. E. Maxwell of Modesto has been appointed county physician and health officer of Stanislaus County to succeed J. L. Hennemuth, who has acted in this capacity for nine years.

Tulare County Medical Society (reported by Elmo R. Zumwalt, secretary)—The medical society met at Hotel Johnson, Visalia, on March 23. The meeting opened with a dinner at which were present twenty-six out of thirty-seven members and six guests. The following officers were elected for the current year: A. W. Preston, president; C. A. Tillotson, vice-president; E. R. Zumwalt, secretary-treasurer; Austin Miller, delegate to State meeting in Yosemite and C. A. Tillotson, alternate.

J. N. Blood was admitted to membership in the society.

W. E. Musgrave, secretary to the State Society, was present and held an informal conference on subjects of importance to medical men everywhere. A question and answer conference about local conditions in Tulare County was continued until very late in the evening. The constituent societies of the state will surely profit by this visit of the state secretary and it will be stimulating to that spirit of co-operation necessary to us all.

The health center clinic and hospital at Visalia is now operating.

Men who have spent many years in securing their legitimate education as physicians, as well as the best element of the citizens of Tulare County, are very much pleased and gratified over the decision of Judge Wallace in sentencing an unlicensed chiropractor to a fine of $500 or an extended jail sentence.

Physician Wanted for Atwater, California—Atwater is a town of 700 inhabitants, located seven miles from Merced. Private offices have been fixed up for a physician and a dentist. The dentist is already located in the town. Any physician interested in the proposition should write to Chadwick & Chadwick, Atwater, California.

ST. LOUIS MEETING OF THE AMERICAN MEDICAL ASSOCIATION

The American Medical Association is a scientific organization, but is composed of members with more than the average amount of "humanity" in their makeup, with social elements too long repressed. These members are weary from bearing the responsibility of many human lives. Instead of having play time they have become public teachers with no recess. The local entertainment committee of the A. M. A. have been busy preparing to show these visitors true St. Louis hospitality and to provide for them such diversions as will be both restful and entertaining.

The golfers will arrive early, in order to participate in the annual tournament on Monday, May 22.

Tuesday evening the opening meeting will be held in the Odean, and arrangements are being made to have the music and addresses transmitted by radio to various parts of the city and to distant cities.

Wednesday evening is given over to banquets such as Alumni, Fraternal, Sectional, etc. On this evening, provision is being made to entertain the visiting ladies and those doctors who are not engaged at the Alumni and Fraternity dinners at one of St. Louis' noted moving picture shows, with special musical and other features for the occasion.

On Thursday afternoon the medical department of Washington University is giving a special Tea on the grounds of the institution. Thursday evening will be given over entirely to the President's reception and it is hoped that as many as possible of the doctors and their ladies will grace the occasion with their presence.

The committee, after visiting the offices of the Mayor and the Director of Public Welfare and being assured of their co-operation, have decided to reserve until Friday evening the chief feature of their entertainment by giving a special program for the entire association in the unique open-air Municipal opera house, which has a comfortable seating capacity of ten thousand. The location of the opera house in the heart of Forest Park, with its special lighting effect made possible by the natural foliage of the forest, can be appreciated only by those who visit it at night. It is the hope of the committee that every visitor at the convention will remain in St. Louis through Friday evening.

The Ladies Entertainment Committee, under the leadership of Mrs. Willard Bartlett, has arranged to take immediate charge of every lady visitor who may be persuaded to accompany the medical member of the family to the convention. They need have no fear of being left alone while the doctor is attending the scientific meetings for practically every hour of their time has been arranged for and it is hoped that many more ladies than usual will visit the "City of Homes"—"The Friendly City."

A special visit to Missouri's Botannical Gardens is being arranged, and will be an important item in the entertainment program. Among other features to be shown will be an old Italian herb garden. St. Louis is justly proud of its world-famous Botannical Garden.

Take the whole week off, Doctor, and spend it in St. Louis. It will be time well spent. You may lose a patient, some may get well during your absence, but your increased vigor when you get back will abundantly make up for any losses. Come to our party for one full week.

Dr. C. E. Burford, 3525 Pine street, is chairman of the Entertainment Committee.

BOOKS RECEIVED

Books received are acknowledged in this column, and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. Selections will be made for review in the interests of our readers and as space permits.

Infant Feeding. By Clifford G. Grulee, M. D., LL. D., Associate Professor and Acting Head Department of Pediatrics at Rush Medical College. Fourth edition, thoroughly revised. Octavo of 397 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1922. Cloth, $4.50 net.

Psychoanalysis: Its Theories and Practical Application. By A. A. Brill, Ph. B., M. D. Lecturer on Psychoanalysis and Abnormal Psychology, New York University. Third edition, thoroughly revised. Octavo of 468 pages. Philadelphia and London: W. B. Saunders Company, 1922. Cloth, $5 net.

A Text-Book of General Bacteriology. By Edwin O. Jordan, Ph. D., Professor of Bacteriology in the University of Chicago and in the Rush Medical College. Seventh edition, thoroughly revised. Octavo of 744 pages, fully illustrated. Philadelphia and London: W. B. Saunders Company. 1921. Cloth, $5 net.

Clinical Electrocardiography. By Frederick A. Willius, M. D. Section on Clinical Electrocardiography, The Mayo Clinic, Rochester, Minn., and the Mayo Foundation, University of Minnesota. Octavo of 188 pages with 185 illustrations. Philadelphia and London: W. B. Saunders Company, 1922. Cloth, $5 net.

Diseases of the Eye. A Handbook of Ophthalmic Practice for Students and Practitioners. By George E. deSchweinitz, M. D., LL. D., Professor of Ophthalmology in the University of Pennsylvania. Ninth edition, reset. Octavo of 832 pages with 415 text illustrations and seven colored plates. Philadelphia and London: W. B. Saunders Company, 1921. Cloth, $10 net.

The Medical Clinics of North America (Issued Serially, one number every other month) Volume V, Number 4, January, 1922. By New York Internists. Octavo of 214 pages, with 38 illustrations. Per clinic year (July, 1921, to May, 1922). Paper, $12 net; cloth, $16 net. Philadelphia and London: W. B. Saunders Company.

Clinical Tuberculosis, by Francis Marion Pottenger, A. M., M. D., LL.D., medical director, Pottenger Sanatorium for Diseases of the Lungs and Throat, Monrovia, Cal. With a chapter on laboratory methods by Joseph Elbert Pottenger, A. B., M. D., assistant medical director and director of the laboratory, Pottenger Sanatorium for Diseases of the Lungs and Throat, Monrovia, Cal. Two volumes. Second edition. St. Louis: C. V. Mosby Company. 1922.

The Etiology and Pathology of Typhus. Being the main report of the Typhus Research Commission of the League of Red Cross Societies of Poland. By S. Burt Wolbach, John L. Todd, and Francis W. Palfrey. Published by The League of Red Cross Societies at the Harvard University Press, Cambridge, Mass. 1922.

BOOK REVIEW

Ephraim McDowell, "Father of Ovariotomy" and Founder of Abdominal Surgery. With an appendix on Jane Todd Crawford. By August Schachner, M. D., F. A. C. Philadelphia and London: J. B. Lippincott Company. 1921.

A most interesting and curious study of the life of this surgical pioneer. It should have a special interest to Californians. California pioneers and Kentucky back woodsmen—these were the men who made the first ventures into the unexplored fields of abdominal surgery.

Instead of the Saturday Evening Post take this book with you the next time you spend a few days on a Pullman. L. E.

A Text-Book of Physiology: For Medical Students and Physicians. By William H. Howell, Ph. D., M. D., Professor of Physiology, Johns Hopkins University, Baltimore. Eighth edition, thoroughly revised. Octavo of 1053 pages, 308 illustrations. Philadelphia and London: W. B. Saunders Company. 1921. Cloth, $6.50.

In this new edition of the standard American text-book, an effort has been made to emphasize the hygienic application of physiology. The book is too good and to well known to need further recommendation. L. E.

The Submucous Resection of the Nasal Septum. By W. Meddaugh Dunning, M. D. New York: Surgery Publishing Company. 1921.

A little monograph on the author's method. Good illustrations and a lot of practical hints but rather scant matter to make a book of. L. E.

Neoplastic Diseases. A treatise on Tumors. By James Ewing, M. D., Sc. D., Professor of Pathology at Cornell University Medical College, New York City. Second edition, revised and enlarged. Octavo of 1054 pages with 514 illustrations. Philadelphia and London: W. B. Saunders Company, 1922. Cloth, $12 net.

A new edition of what is by far the best book on cancer in the English language. Both text and illustrations make it invaluable to the surgical pathologist. L. E.

The Medical Interpreter. Selected practical foreign medical and surgical literature. By Albert Allemann, A. B., M. D. Chicago: The Medical Interpreter. 1921.

Short articles snatched haphazard from foreign journals dealing on one page with "hair falling," with a recipe for the same, and hemorrhoids; on another with gall-bladders and gleet. The result needs no description. It reminds one of the Universal Encyclopedia and Farmers' Home Companion whose itinerant peddlers grandpa used to impale upon a pitchfork. L. E.

Protein Therapy and Non-specific Resistance. By William F. Petersen, M. D., Associate in Pathology, University of Illinois, College of Medicine, Chicago, Ill. With an introduction by Joseph L. Miller, M. D., Professor of Medicine, Rush Medical College, University of Chicago, Chicago, Ill. New York: Macmillan Company. 1922.

The volume is very complete but the matter of which it treats stands upon so uncertain a foundation that this very detailed work will have but a limited audience. L. E.

NEW MEMBERS

John D. Hartley, San Diego; Thos. F. Thorp, San Juan Bautista; Emma E. McKay, Hollister; Chester W. Merrill, Hollister; Richard W. O'Bannon, Hollister; Joseph M. O'Donnell, Hollister; H. B. Farnsworth, Oakland; Wm. G. Morton, Needles; F. M. Gardner, Loma Linda; E. W. Weirich, Angels Camp; James D. Coyle, Sacramento; H. A. Clattenburg, Folsom; David Cohn, San Francisco; Hiram B. Duncan, San Francisco; Llewellyn L. Jones, San Francisco; Delta R. Olsen, San Francisco; Clifton A. Thomas, San Francisco; Percy A. Millar, San Francisco; Jos. A. Sampson, San Francisco; John D. Humbar, San Francisco; Thos. H. Kelly, San Francisco; N. T. McArthur, Imola; H. R. Coleman, Napa; Francus E. Morgan, Santa Cruz; Dexter N. Richards, Berkeley; Edgar D. Smith, Los Olivos; Amy C. Stevens, San Francisco; Robin L. Richards, San Francisco; John E. Wilson, Los Angeles; R. Umesawa, Los Angeles; Homer S. Wilson, Lankershim; James Johnston, Los Angeles; Florence Keller, Los Angeles; G. F. Harding, Ocean Park; A. V. Stephenson, Long Beach; Frank H. Chase, Los Angeles.

DEATHS

Bolton, Manzanito B. Died in Quincy, Calif., March 27, 1922. Was a graduate of the California Medical College, California, 1899, and licensed same year. Age 44.

Bryant, George Waldo. Died March 14, 1922, in Truckee, Calif. Was a graduate of the California Medical College, California, 1897. Licensed in 1897. Cause of death, influenza.

Bennett, E. G. Died in Petaluma, Calif., February 21, 1922. Age 68. Was a graduate of Rush Medical College, Ill., 1878. Licensed in California, 1898. Was a member of Sonoma County Medical Society.

Cottingham, R. C. Died in San Francisco, March 11, 1922. Was a graduate of the College Medical University of Missouri, at Columbia, 1883. Licensed in California, 1885.

Chapin, J. E. Died in Redwood City, California, March 23, 1922. Was a graduate of the Washington University, St. Louis, Mo., 1909. Licensed in California, 1912. Was a member of San Mateo County Medical Society.

Hardy, Oscar R. Died in Los Angeles, March 5, 1922. Age 41. Was a graduate of Northwestern University Medical School, Chicago, 1912. Licensed in California, 1920.

Jones, Frank C. Died in Los Angeles, March 2[illegible], 1922. Was a graduate of the University of Michigan, 1880. Licensed in California, 1914.

Neal, Harrison. Died in San Miguel, Calif., March 11, 1922. Was a graduate of Jefferson Medical College, Pa., 1859. Licensed in California, 1876. Was 87 years old.

Rowland, F. F. Died in Pasadena, Calif., March 12, 1922. Was 74 years old. A graduate of Jefferson Medical College, Pa., 1873. Licensed in California, 1888.

California State Journal of Medicine

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Editor and Secretary - - - - - - - - - W. E. MUSGRAVE, M. D.
Managing Editor - - - - - - - - - - CELESTINE J. SULLIVAN
Superintendent of Publications - - - - - - - - WILLIAM H. BARRY

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SOME ACCOMPLISHMENTS AND PROBLEMS OF THE MEDICAL SOCIETY OF THE STATE OF CALIFORNIA*

By JOHN H. GRAVES, M. D., San Francisco

Following the custom of my predecessors in the Presidential office, I delivered an inaugural address last year at Coronado that differs from those of former years in that it took less than one minute of your time. Its brevity was not due to any lack of appreciation of the signal honor you conferred upon me, nor was it due to any lack of understanding of the many pressing problems that await solution. It was because of a definite knowledge of the great volume of work that the welfare of the Society demanded should be completed without delay and was an effort to establish a time-saving precedent.

Today, after one year as President-elect and one year in the office of President, it becomes my duty to render a brief account of my stewardship of your interests by describing as briefly as possible the year's work and calling to your attention the more important measures that demand action by this Society.

More than half a century has elapsed since a small group, devoted to the advancement of their profession and dedicated to the relief of human suffering, organized the Medical Society of the State of California. When in 1917 its membership had grown to 2400 and Dr. Philip Mills Jones, who, after serving for several successive years as Secretary, had been removed by death, there were many in our ranks who believed that our Society had reached the zenith of its activities and the maximum in membership, and yet on the first day of May of the present year we find the names of over 3500 of the physicians of California on the membership roll of this organization.

We find its Journal enlarged in size, enhanced in value as a scientific publication, with increased circulation, and for the first time in its history, paying its way.

The recently adopted policy of giving papers read before the County Societies the same standing, with equal chance for publication, with those read before the annual meeting of the State Society has resulted not only in elevating the standard and increasing the value of papers contributed to the various county units as well as to the State Society, but has given to the Journal more valuable papers than it can possibly hope to publish.

Among the year's activities should be mentioned the Extension Lecture Service, which brings to the various County Societies men who have made special studies in certain subjects and disseminate among the members of the profession the latest knowledge pertaining thereto by written papers and scientific demonstrations. To this splendid corps of teachers, true to the first principles of their profession, volunteering as they do from every section of the State, permit me, as the spokesman of the membership of this Society, to express my grateful appreciation and a fervent wish for the continuance of their efforts.

Any review of the year's work would be sadly deficient and woefully incomplete without at least a brief review of some of the more important of the many activities of our most capable Secretary. In addition to the crushing work in his office, such as answering thousands of letters and telegrams, holding conferences by the hundreds, locating over one hundred capable physicians in the localities that needed much their services, supplying hundreds of technical assistants to doctors and hospitals, and other hundreds of specially trained and qualified nurses, he has in some mysterious manner found time to travel thousands of miles up and down this State serving you, and through you, the people of California. In twenty-four days this devoted man traveled by automobile over 1600 miles, met over 1500 physicians, spoke before twenty County Medical Societies, visited and assisted in the solution of the problems of over seventy hospitals. During the year he has visited at least once, and in some instances several times, thirty-four of the forty-one County Medical Societies in this State. He assisted in organizing one new society and resuscitated and brought back to vigorous health one that had been in such a comatose state that it had not held a meeting for over five years.

What can we do or say that will properly express our appreciation for a man who, with such zeal and energy and intelligence, dedicates his remarkable abilities to our welfare?

Were it not for the fact that Mr. Hartley F. Peart, the Attorney of the State Medical Society, is to address you this morning on some of the problems of medical defense, I would dwell upon the wonderful record and the immense value to the medical profession of our legal department. It is an outstanding feature in the activities of this organization and no member can afford to leave this year's meeting without being certain that his name is on the list of members of the Indemnity Defense Fund. For the success of this work our Society is most deeply indebted to Mr. Peart, who, in this as in all other matters in which we find his advice necessary, has displayed a legal ability and a loyalty to the ideals of our

* President's Annual Address, delivered at the Annual Meeting of the Medical Society of the State of California, May 18, 1922.

profession greater, I am sure, than those who are not thoroughly familiar with his work can appreciate.

To Mr. Hubert Morrow, who so ably cares for the interests of the fund south of Tehachapi, all praise and thanks are due. The work for hospital betterment, which has been productive of such phenomenal results, has been possible only because of the close co-operation of this Society with the section appointed for that work, by the League for the Conservation of Public Health. In fact, much of the constructive work of our Society, and I think much of the constructive work accomplished by the League for the Conservation of Public Health, was made possible by the close and harmonious relation that exists between these two splendid organizations.

With this work proceeding as successfully and harmoniously for the next year as it has for the past year, the hospital service to the public of California in 1923 will be as much better than that rendered at present as our present hospital service is superior to that rendered in most of the States at the present time.

A year ago it was decided to call a meeting of the presidents and secretaries of the various County Societies, with the understanding that if there was reasonable response to the invitation, a semi-annual meeting of presidents and secretaries of the various county units would be instituted as a permanent feature. What was an experiment a year ago is now a brilliant success.

At the meeting of the officers of the Societies held in San Francisco this past winter, thirty-four of the forty-two County Societies were represented by forty-five officers. The increased efficiency of our organization as a result of the meeting of the various units has been made manifest in ways too numerous to mention at this time. The work of the Industrial Medicine Committee has gone on with sure but necessarily slow progress. This will be thoroughly dealt with by the chairman of that committee, Dr. Parkinson. So I will not comment further on it.

So much for a fractional and extremely sketchy review of the year's work.

And now may I beg your close attention to the brief mention of two subjects which have occupied a most prominent place in my mind during the past year? The first is that of medical education and training. It will be the subject of a paper that will be read before this body tomorrow morning by Dr. Ray Lyman Wilbur, President of Stanford University. As a teacher of medicine, as a clinician, and as the executive head of a great University, I am certain, though I know nothing of the contents of his paper, that it will present many new thoughts in a concise and masterful manner; but if I may be permitted to state some personal views, I will call your attention to the fact that the men and women of the medical profession who are engaged in active practice serving the citizens of California, by returning them to health in the shortest possible space of time when stricken with illness or injury, are not taking the active interest that they should in the education and training of those who are to be their successors. No group can understand or appreciate as well as you, the medical practitioners of California, the real need in the way of medical and surgical service of that great body of worthwhile American citizens that looms so large between the thin line of millionaires on one side and the thin line of paupers on the other side.

This great group, the real group, that is so seldom seen in the teaching clinic or in the $20-a-day room of the exclusive hospitals, this self-respecting, able to pay, willing to pay, business, salary-earning and farm-owning people need more good doctors, fewer poor doctors and fewer specialists, and any doctor can call himself a specialist if he so desires. We need specialists and the people need them, but with numbers diminished and qualifications increased.

In a supplement to a report on medical education and hospitals of the American Medical Association in Boston, Arthur Dean Bevan said: "The Council on Medical Education and Hospitals of the A. M. A. believes that the time has arrived when we must reorganize our scheme of undergraduate medical education so as to give the undergraduate a broader and simpler training in medicine which will make him a better general practitioner. That means simplifying the course under three clinical heads—medicine, surgery, and obstetrics. We must make the effort to train the man who is going into a community to do general practice in the broadest and best possible way. We feel, moreover, that the general practitioner is by all odds the most important man in medicine. Numerically he should be at least 90 per cent of the medical profession. This broadly trained man is the man who can take better care for the health of the community than can any group of specialists no matter how competent."

Not only do I heartily subscribe to the statements of Dr. Bevan, but I respectfully request of my successor to this office that he use his influence to create interest in the subject among the great body of the profession, and I would suggest that at least once a year each County Society requests from one of its members not engaged in teaching, a paper on medical education. This paper, filed in the office of the Journal, would make interesting reading and, I believe, profitable study for the teachers in the medical departments of our universities.

The other subject, like socialism, is somewhat difficult to define. It always reminds me of the various descriptions of the elephant by the six blind men of Hindustan. It is generally alluded to as State Medicine and embraces all such things as compulsory Health Insurance, Diagnostic and Health Centers, controlled and operated by political power. It is an insidious effort by certain misguided and sometimes sinister influences to control by political power the practice of our profession.

It is an attempt under the specious plea of bringing medical aid to the public, to regulate and control not only the practice of the profession, but the activities of the private citizen.

Your time is too limited to permit of an ex-

tended discussion of this most important subject, but let me warn you against lending your support to measures, however plausible, on cursory observation, which may, like the wolf in sheep's clothing, prove to be radicalism covered with the cloak of philanthropy. The teachings of Jefferson, the philosophy of Franklin, and the wisdom of Washington are still more acceptable to most American hearts than the doctrine of Karl Marx.

It is a pleasure to express our appreciation to our distinguished guests, both of our own profession and those distinguished gentlemen, the Hon. John O'Connell, Secretary of the State Labor Association, and the Hon. John D. Fredericks, President of the Los Angeles Chamber of Commerce, for their presence at this meeting. Their intelligent and sympathetic interest in our profession and in our public health problems is gratefully acknowledged by the members of this Society and the League for the Conservation of Public Health.

In conclusion, here in this stupendous amphitheatre, this great gorge chiseled by Almighty God and discovered by a member of our own profession, here by these great waterfalls that were falling when the Pyramids were built, when Christ was crucified, when the fight at Lexington and Concord was news, that will be falling when the events of today have passed into the dim twilight of tradition and disappeared in the black night of oblivion, I desire with all sincerity to express my heartfelt thanks for the great honor which you conferred upon me when you made me the chief executive of your Society, and in saying farewell, to assure you that the work of the years past has been a labor of love and a feeble effort to return in some small way just a little for the very great benefits bestowed on me by members of our profession.

DUBUQUE COUNTY MEDICAL SOCIETY ASSUMES CARE OF POOR

The Dubuque County (Iowa) Medical Society and the County Board of Supervisors have entered into an agreement whereby the medical men of Dubuque County agree to render aid to the indigent poor of the county for a year at the stipulated price of $3,250. The doctors have agreed to each serve the county for a period of ten days, during which times they attend all persons who are county charges free of cost to the individual. This service only applies to the indigent poor. The specialists of the city are allotted specific times when they are subject to call for the care of indigent poor. The money received in payment for this service does not go to the individual physician. A part of it is used by the society to purchase equipment to make more interesting their monthly meetings, and to pay the expenses of experts who may be brought from a distance to address the society.—Illinois Medical Journal, April, 1922.

Medical Veterans of the World War—Those physicians who served at the Letterman General Hospital during the war are urged to send their latest addresses to Dr. A. H. Reinstein, Flood Building, San Francisco, for another reunion dinner is being planned and a full attendance is desired.

ORIGINAL ARTICLES

RESPONSIBILITY FOR STATEMENTS AND CONCLUSIONS IN ORIGINAL ARTICLES

The author of an article appearing in the JOURNAL is entirely responsible for all statements and conclusions. These may or may not be in harmony with the views of the editorial staff. Furthermore, authors are largely responsible for the language and method of presenting their subjects. All manuscripts will be carefully read, but editorial privileges will be exercised only to a very limited extent. It is believed that the manner of presentation of any subject by any author determines to no small degree the value of his conclusions. Therefore, both the author and the reader, in our opinion, are entitled to have the subject as presented by the author as little disturbed as possible by the editors. However, the right to reduce or reject any article is always reserved.

PRESIDENT'S ADDRESS ANNUAL MEETING LOS ANGELES COUNTY MEDICAL ASSOCIATION DECEMBER 15, 1921—GOVERNMENTAL ACTIVITIES AND TENDENCIES IN THE HEALTH FIELD

By WALTER V. BREM, M. D., Los Angeles, Calif.

It is becoming increasingly apparent that large numbers of persons are feeling great irritation and dissatisfaction on account of present conditions of medical practice. Two of the causes of this dissatisfaction are:

1. The enormous increase of knowledge during the past fifty years and the tremendous output of medical literature have rendered it impossible for one physician to cover adequately the vast field; and so there has come about the development of the specialists. These specialists have worked hitherto largely independently of one another, and, in order to secure their services, a patient must often be sent from pillar to post at great inconvenience and a great expenditure of time and energy. Naturally, such patients feel considerable irritation, and, more and more, large groups are seeking a simpler solution of their problem.

2. This irritation is increased by the conditions determining professional fees, inability to estimate the probable cost of sickness, the high cost of sickness, especially for the large group of persons with only moderate incomes, and the frequent inefficiency of the present system of practice. Under present conditions, the factors entering into the determination of a fee for professional services are so many and intangible that it is practically impossible to take any steps toward working out an acceptable schedule. Each physician places his own valuation upon the services rendered. Some of the factors entering into such a valuation are: The skill and experience of the physician; the reputation of the physician and the demand for his services; the character of the services rendered; the result of the treatment, i. e., the benefit the patient receives; the customary charges in the community for such services; the legal and professional hazards involved; the financial status of the patient.

It can be appreciated readily that most of these factors are so intangible that they cannot be used

as a basis for determining a working schedule, while the last factor, "the financial status of the patient," involves the question of the right of one individual to demand that another shall liquidate the debt of, or pay for the charity received by, a third person.

These conditions have led to wide discussions, not only by the laity, but also by those of the medical profession who are interested in the problems of medical economics and who see grave danger ahead if the problems are not met with forethought and vision. In some foreign countries actual experiments by governments have been made toward their solution. So the unfortunate term of "State Medicine" has arisen without any definite understanding of its meaning.

As a matter of fact any governmental activity in the health field is State medicine, and some of these activities are certainly founded upon sound principles and should be supported. Other possible extensions of governmental activities may be grave menaces to the public health, and incidentally to the medical profession. I say "incidentally" to the medical profession because it is axiomatic that such broad questions cannot be justly solved from the point of view of the welfare of a special group, but only upon the basis of the general welfare.

It has seemed appropriate, therefore, to review briefly present governmental activities in the health field, to indicate possible extensions, and to state the problems worthy of our consideration.

PRESENT GOVERNMENTAL HEALTH ACTIVITIES

1. *Preventive medicine.* In this field we cannot deny the value of governmental activity. The main plank in the platform, so to speak, of the medical profession in the municipal election in Los Angeles on June 7, 1921, was as follows: "One of the highest functions of government is the protection and advancement of the health of the people both for economic reasons and to promote the happiness and virility of its citizens."

Governmental activities in the field of preventive medicine may be classified as follows:

Sanitary engineering and control of health problems in community services.

Quarantine.

Vaccination against smallpox, typhoid and diphtheria.

Consultation in contagious diseases.

Vital statistics.

Venereal prophylaxis, quarantine and treatment of patients under quarantine.

Inspection, examination and physical training of school children.

Education in the elementary laws of health and personal hygiene.

Epidemiological research.

2. *Medical education in State universities.*

3. *Medical services of the Army, Navy and Public Health Service.*

4. *Hospitals for indigents.*

5. *Psychopathic institutions, contagious disease hospitals and sanitoria, and emergency hospitals.*

6. *Medical care in government institutions, as penitentiaries.*

7. *Restriction or definition of those who care for the sick, i. e., the issuance of certificates on the basis of educational standards by State Medical Examining Boards.*

8. *Industrial Accident Insurance.*

Numbers 1, 2, 3, 4, 5, and 6, I assume require no discussion, for their value and legitimacy seem undisputed.

Number 7 invites discussion as to whether the medical practice act should restrict the care of the sick to those qualifying by carefully determined educational standards, or should it only define for the benefit of the public those who have qualified and allow others to practice at will, restraining them only from false pretensions regarding qualifications? Those who advocate the latter view appear to lose sight of the fact that efficient quarantine regulations by health departments depend upon the ability of practitioners to diagnose disease and by prompt reports to aid in checking epidemics. Those in the field should form a trained branch of the army evolved for the combat of disease, and the efficiency and morale of the army should not be lowered by permitting untrained men in its ranks.

Another phase suitable for discussion is the advisability of the enforcement of the act by the Medical Examining Board. It has been argued with reason that the board is an educational and not an executive body, that enforcement of the act should be a function of the regular legal machinery, and that enforcement by the board serves to raise the cry of "persecution" by offenders, and thus confuses and arouses suspicion in the public mind.

Number 8, industrial accident insurance, is just emerging from the experimental stage. It provides in California that employers must assume the risk from accident to employes. The compensation is determined by the State Industrial Accident Commission. The employer may carry the risk himself, he may insure in non-official insurance companies, or he may insure with the State Compensation Fund. The last is, in effect, a government insurance company, and it involves the question of governmental invasion of the field of business. If this works out for the benefit of the community, however, there should be no ground for criticism on that score. There may arise, however, legitimate differences of opinion regarding details of the *modus operandi*, but time must be allowed for adjustments, and it would seem wise for us to support the experiment, letting it go forward aided by our sympathetic consideration and counsel.

POSSIBLE EXTENSIONS OF GOVERNMENTAL ACTIVITIES

The term, "State Medicine" as ordinarily used refers, I take it, to certain possible extensions of governmental health activities.

1. Compulsory health insurance.

2. Zoning of communities and distribution of physicians.

3. "Health centers" for the treatment of the indigent sick.

4. Pay clinics with physicians employed by the Government.

5. Complete control of medical practice as a public utility, governmental employment of all physicians, and ownership or control of all health institutions (hospitals, etc.).

(1) *Compulsory health insurance.* The proponents of compulsory health insurance have advocated the following lines of experiment:

(a) Industrial health insurance, along the line of industrial accident insurance, in which the employer now pays for the whole risk.

(b) Industrial health insurance, in which the employer and employe share the risk in certain proportion. This was the basis of the compulsory health insurance initiative which was defeated in California in 1918 by a majority of 224,000.

(c) Health insurance, in which everyone with an income below a certain figure must carry his own insurance with possible assistance from the government, e. g., the "Capitation" fee in England.

In all these instances the government may or may not form an official insurance company, like the State Compensation Fund. If it should, it would control, or enter into competition with other insurance companies in controlling, the professional services rendered. In England the government has controlled the professional services and paid the physicians from the "Capitation" fees. There seems to be widespread dissatisfaction in England both among the laity and the medical profession, and there has been serious discussion regarding the abandonment of the experiment. Aside from the criticism of the enormous expense to government, which does not seem a serious criticism, the great objections have been that the laity complain of perfunctory service and inadequate medical treatment; that the system is developing large numbers of neurotic persons, who, because the service has already been paid for and costs nothing additional, run to the doctor with every conceivable ailment real or imaginary; and the dissatisfaction of the public has resulted in an enormous increase of cultism and quackery.

Such a situation is exactly what we would anticipate under compulsory health insurance, i. e., we would look forward to inferior professional services and to an undermining of the health morale and therapeutic conceptions of the people. Moreover, the people would not retain the right which they so highly prize of selecting their own physician and of experiencing a certain valued relation that should exist between a patient and his chosen physician. A further objection advanced to government controlled medical practice is that it undermines initiative, does not recognize merit, does not stimulate investigation, and, in general, tends to paralyze scientific progress.

These criticisms, if valid, which they undoubtedly are, constitute insuperable objections to compulsory health insurance, disadvantages against which the apparent advantage of smaller professional fees should have no weight. It is imperative, therefore, for the sake of the public welfare and the progress of scientific medicine to oppose any tendencies toward such a program.

(2) *Zoning of communities and distribution of physicians.* There is no question but that the distribution of physicians is a grave matter, and that rural communities suffer from the present tendency of physicians to congregate in the larger urban communities. Governmental interference, however, would be an infringement upon an individual's right to live and work in the place of his choice, and it should be resisted. However, the problem is a proper one for the organized profession to consider, and the American Medical Association is now collecting data in an effort to find a solution by persuasion and dissemination of information rather than by force.

(3) *"Health Centers" for the treatment of the indigent sick.* It may be argued in favor of such health centers that they are but an extension of the idea of hospitals for the care of the indigent sick. The government takes care of poor hospital patients, why not also of ambulatory patients? The psychology of the two situations is different. We know that the American people will apply for admission to a County hospital only when they are financially embarassed, and in definite need. But experience has shown that this is not true of a free clinic, to enter which well-to-do patients will sometimes dress in old clothes, take off their diamond rings, and leave their automobiles around the corner out of sight. Would not government free clinics almost certainly invite such behavior, stimulate a desire to get something for nothing, tend to create a neurotic group, and generally undermine the pride and morale of large numbers of the people?

(4) *Pay clinics with physicians employed by the government.* Such an undertaking by the government would lead logically and inevitably to an extension of activity which would cover the whole field of medicine. Therefore, the discussion of government pay clinics may be included under the next head.

(5) *Complete control of medical practice as a public utility, governmental employment of all physicians, and government ownership or control of all health institutions (hospitals, etc.).*

The questions that would be involved are:

(a) Would the public receive better medical attention? No.

(b) Would the cost of sickness be reduced? No.

(c) Would disability from sickness be reduced? No.

(d) Would the progress of knowledge be advanced or retarded? Retarded.

(e) Would the service rendered by the medical profession be more or less efficient? Less.

(f) Would a premium be placed upon mediocrity and political pull? Yes.
(g) Would the system be swamped in "red tape" and "graft"? Yes.
(h) Is it what the people want? No.

The discussion of compulsory health insurance applies with equal force to most of these questions, and I would answer them categorically as indicated above.

The undertaking would be an enormous one, compared with which the medical service of the Army during the Great War would be but a minor affair. Enormous funds would be involved, great political machines would be built up, red tape and graft would be intolerable, and the morale of the forces fighting against disease would be undermined.

Have we confidence enough in the machinery of government and in our politicians to consider for one moment entrusting to them our patients, our profession, ourselves? Have we not already had sufficient evidence of the inadequacy of government in large business undertakings? Yet the previous problems that have been met with are of elementary simplicity compared with the problems to be met in governmental organization and control of medical practice.

Medical practice is in a stage of evolution. Conditions have practically wiped out the old family physician and it would seem impossible for him to become re-established in his old position of importance, although there are authorities who think that his re-establishment would solve many of the problems of practice. The independent specialist has largely replaced the family physician, and has brought with him vexing problems with dangerous potentialities. New complications have arisen and must be squarely faced, and a further transition in the practice of medicine must take place.

The question is, shall the transition be a natural one of evolution resulting from study and wide experiment by numbers of well trained thinking men, or will impatient people lay violent hands upon the problem and demand that it be entrusted to government agencies in a gigantic and dangerous experiment? We are, I may say, unqualifiedly opposed to such an experiment, which, we believe, would seriously imperil the health and happiness of the community.

PROGRAM PROPOSED

We may well be asked, if we reject government agencies, what constructive program have we to propose? Many answers will be given, for the problem is a difficult and intricate one and experimentation must be broad. However, two main lines of experiment seem to be developing. The first is the group practice idea, some form of which would seem to be a logical development in order to bring together the specialists, thus co-ordinating effort and increasing efficiency, reducing overhead expenses, and reducing and stabilizing professional fees. Such groups could care for a far greater number of patients and far more efficiently than could the individuals of the groups if scattered, and better medical practice at a much reduced cost might be the result.

The second line is the idea of the endowed hospital as a community center from which radiate health ideals through all its manifold services. Such a hospital should be organized to care for the sick at a cost commensurate with their financial resources, the deficit to be covered by the interest on the endowment. The governors of the hospital might well be selected from the group of donors to the endowment fund, donors who would be men of broad vision, vitally interested in the community life and the successful service of the hospital.

Such a great hospital would serve as a model for smaller communities and would stimulate widely the development of numerous hospitals along sound lines, that is, hospitals conceived in the spirit of community service.

CONCLUSIONS

"State Medicine" is an unfortunate term. It may be defined, however, as referring to any or all of the following extensions of governmental activity in the health field—compulsory health insurance, distribution of physicians, free and pay clinics, and complete control of medical practice as a public utility.

The medical profession believes that such an extension would be a perilous experiment and inimical to the public welfare, and it is unqualifiedly opposed to any activity tending toward such a program.

NEWSPAPER CARDS OF DOCTORS

A recent examination of many newspapers of the State shows that a certain percentage of the physicians of most county societies carry their professional cards in their local newspapers. The printed ethics or moral code of the medical profession authorizes cards of this character, provided they are sanctioned by the county society and provided further that no card shall express anything more than the physician's name, office hours, telephone and the limitations, if any, placed upon his practice. A certain amount of this character of advertising is going on in more than thirty counties of the state in a large number of papers. In most instances, the cards are thrown in indiscriminately with all sorts of business and professional cards, as well as those of irregular and frequently unlicensed practitioners.

If it is the policy of our county societies to engage in this form of advertising, it is suggested to them that they do it in a dignified manner, by resolution of the county society and by control of the wording in the cards by the committee on censorship, and, most important of all, by insisting on these cards being inserted "boxed" under the name of "County Medical Society Directory." The best example seen in any county paper from a recent survey is that of Stanislaus County, where the cards of many of the members are "boxed," thus controlling the space and distinguishing it from every other advertisement in the paper. Societies or officers interested in this question might secure copies of the Modesto papers by addressing Dr. R. E. Maxwell, secretary of the Stanislaus County Medical Society, Modesto. Nothing in this editorial should be construed as an endorsement by the State Society or the editor of the policy of placing cards in lay publications.

WHAT THE GENERAL PRACTITIONER CAN DO TO IMPROVE THE DIAGNOSIS AND TREATMENT OF DISEASES OF CHILDREN *

By LANGLEY PORTER, M. D., San Francisco

In the time allotted, some part of the matter involved can be touched upon, and as the specialty of Pediatrics is, in reality, no specialty at all, but merely the practice of general medicine among those of tender age, physicians may pardon a pediatrist if he joins in such a discussion.

Possible improvements on current methods of treating diseased children offer a wide field for discussion, wider even than would be afforded by a consideration of those things which might well be considered in an attempt to better pediatric diagnostic methods. For the term "treatment" must be taken to include not only curative measures, but prophylactic measures as well. Even though prophylaxis leads far afield into studies of nutrition, ante-natal hygiene, personal hygiene, school hygiene, recreational hygiene, and to an understanding of many other aspects of public health.

The questions that arise out of the growing lay interests in preventive pediatrics might well occupy this society through many hours of its sessions, for in such are bound up much that is momentous for the future of our profession. These problems and their possible solutions are so many and so revolutionary in their implications that the present offers occasion to do no more than merely to indicate a few of them. Certain it is, however, that the answer to the queries inherent in the title of this paper would be incomplete if it did not point out that one of the general practitioner's greatest contribution to pediatric improvement must come through the organization of a service of information, advice and education to parents, designed to keep the children of the community in health. Such a service must begin by instructing the mother about her unborn baby. Later during the child's infancy it will be continued, and it will insist on properly supervised and adequate breast feeding when this is possible, or, in the event of a failure of the breast secretion, upon a well-guided course of artificial feeding. Already, such endeavors as these are enlisting the sympathy and effort of many physicians, but such a service must go further. Oversight of the nutrition and of the personal hygiene of the runabout child, should be a duty added to the many others under which the general practitioner staggers, and, at this point, even, he must not halt for the individual well-being of the school child, and the conservation of the adolescent's mental and physical health are essentially medical problems to be solved by the physician in general practice.

If we maintain our leadership in matters of health, we must be prepared to organize as part of our practice health services on some basis of proper remuneration, for, whether we like it or not, service must be given and leadership of the fast-growing health movement must be seized, otherwise not only will we fail in our duty, but we will lose the confidence and respect of our communities; a confidence and respect which has come to us as an inheritance from a long line of devoted general practitioners. It is for us to earn and to hold a continuance of this confidence and respect. Although only the medically trained can hope to accomplish results of real value, lay organizations, some of them hostile to our profession, already are reaching out to do much of the work. No matter how we as individuals view it, the movement for general health education is here, and it is here to stay.

The neurotics of the future are being trained today, trained by mothers, grandmothers and nurses, whose mistaken efforts to be kind often develop egocentricity and willfulness in their charges, and the physician who knows how suggestible children are, and who is aware of their tendency to negativism and egocentricity has to counteract this training, and to instruct parents how to treat their children so that they shall not grow up neurotic. To persuade mother or auntie or any other doting relative that it is kinder to keep an adored youngster out of the limelight, away from the center of the stage, and to revive in practice the old adage, "Children should be seen and not heard," will demand all that any man has of fortitude and patience.

No more important contribution to Pediatrics has been made than that which follows from the pioneering of Howland and Marriott on the importance of maintaining a normal fluid balance in the young child's body. The recognition of the urgency of the need for rapidly restoring fluid to compensate that lost from the tissues has been followed by a new emphasis on the value of the subcutaneous, intravenous, and intraperitoneal routes, for the injection of sterile normal saline solutions. Of these routes, the intraperitoneal is usually preferred unless peritonitis, or abdominal distension complicates the clinical picture. When the peritoneal route is chosen, it must first be determined that both the bladder and the stomach are empty, and that intra-abdominal disease is absent. The fluid may be injected by gravity or from a Luer syringe. It is important that the needle used shall have a short bevel (2 mm.). The tissues of the abdominal wall are seized about an inch below the umbilicus, between the thumb and fingers of the left hand. The needle is passed through that part of the abdominal wall which is included in the grasp of the digits. In this way the passage of the needle is guided, and the underlying viscera are protected. Once the needle is through the wall, the shank is depressed till it lies almost parallel to the skin, and it is then thrust gently upward. The shank is then connected, and the fluid flowing slowly is allowed to enter from either the gravity glass or from the Luer. Pains must be taken to maintain the temperature of the fluid at 100 to 101 degrees, for the fluid, as it flows from the

* Read before the Fifty-first Annual Meeting of the Medical Society, State of California, Yosemite Valley, May, 1922.

needle-point, will be about 3 degrees colder than it is while in the container. Certainly a mastery of this technique and a wider use of this method by the general practitioners will tend to improve the treatment of disease in children.

The more frequent employment of glucose in intravenous injection, another desirable measure too little used, also offers the profession opportunity to improve its therapeutic methods. The great value of this measure rests upon the fact that under the stress of non-diabetic ketonuria, of the acidosis, which complicates vomiting and diarrhœa, during general infections and in most toxæmias, the glycogen reserve of the body becomes depleted and the reserve can be augmented, and to some degree restored by the intravenous use of glucose. The method has also the advantage that glucose in hypertonic solutions of from 10 to 15 per cent draws fluids from the tissues into the blood stream, and also acts as a diuretic. Unfortunately, we have been taught to fear the use of sugars. Nevertheless, the only way to maintain the glycogen reserve in the presence of acidosis is to give glucose or lactose solution freely by mouth. Often if quantities of such a sugar solution, well diluted, are given persistently, and in spite of the emesis, vomiting will be promptly aborted and checked. In persistent or in neglected cases of cyclical vomiting, when sugar by mouth alone is ineffective, the intravenous injection of 10 per cent glucose solution is life-saving, and the intraperitoneal injection of normal saline solution is an invaluable adjunct.

The general practitioner who is earnestly endeavoring to improve the treatment of children, would make no mistake if he resorted to a more extensive use of hydrotherapy. Packs of mustard, hot, tepid or cold—full packs or one-half packs—and baths will really do all that antipyretic drugs are vainly expected to accomplish.

If an increasing knowledge of hydrotherapeutic methods led to the abandonment of many antipyretic drugs in pediatric practice, much would be accomplished for the benefit of sick children. There would certainly be a great advantage in the development of an attitude of distrust for too much drug therapy in general. A determination to use drugs only where specifically indicated, under circumstances in which the physiological action of the drug makes it a logical weapon against the pathological process which is causing distress, would be the mark of much progress.

The practitioner who is able to escape the overuse particularly of laxative and purgative drugs, and who can attain the results he seeks by wise regulation of diet, regime, exercise and habit training, and hydrotherapy, certainly is contributing to better the treatment of disease in children. So, also, is that man who himself has learned and who has taught the nurses and the mothers of his patients that a vomiting child who is constipated is to have its bowels moved by enema only, that under no circumstances shall purgative drugs be given it, for fear that an obstruction of the gut has occurred. The admonition may be of use but rarely, but the general application of such a rule might have saved some of the babies who have died after intussusception or volvulus or the strangulation of a hernia.

The unnecessary mortality rate in diphtheria, dependent upon delayed diagnosis or upon inadequate dosage of antitoxin, is a constant reminder that in this field, at least, there is opportunity to improve diagnosis and treatment. Here clinical signs may be misleading and the laboratory a fallable aid, but for the child's sake, let it never be forgotten that it is harmless to give antitoxin unneeded, and murder to omit when it is needed. The practitioner who knows what Park and his associates have done, and who practices to elucidate the problems of treatment and of prophylactic in diphtheria that they have taught, is surely contributing much to the betterment of medicine, especially if he has come to use antitoxin by intramuscular injection rather than by subcutaneous. He ought also to have in mind that intravenous injection can possibly be used in the treatment of neglected or of very toxic cases. When he does find it necessary to use the vein for injection of antitoxin, he must scrupulously observe the technique of desensitization.

A wider appreciation of the value of antidysentery serum would be an advantage to many infected children, if it led to more frequent use by intravenous injection in those patients who have become deeply intoxicated. The more frequent use of polyvalent anti-streptococcus serum in those patients whose blood stream has revealed infection by blood culture, might not accord with the views of all authorities, but well diluted in hypertonic glucose saline, given slowly, this serum will often prove to be life-saving; under the same pathological condition, the additional use of transfusion by the direct or indirect method in these septic cases amplifies the possibilities for good. A more frequent resort to transfusion, always with due regard to its proper technique, offers the physician opportunity to save lives. Even the intramuscular injection of whole blood, simple as it is, is a neglected procedure in spite of the fact first demonstrated by Oscar Schloss that it checks idiopathic hemorrhage of the new-born with promptness and certainty. It is hardly less valuable as an adjunct to dietetic measures in the treatment of infantile anæmia and nutrition.

A glance over the domain of dietetics, nutrition, and therapeutics, reveals other fields that might reward the physician's closer cultivation. Vitamines are flung at us from every angle until we are, as the English say, "quite fed up on them," and with all the pother, we have learned just what our forefathers knew and what every physician knows, that is, that fat and green vegetables and the parts of grain next the pericarp are essential to complete nutrition. It is not to be wondered at that many physicians in general have been turned away from interest in foods and feeding by pesky percentages and the curse of calories wished upon them by the higher-browed mathematicians in signed and cosigned pages of

formulæ. Certainly, when the United States Bureau of Child Hygiene send broadcast such pernicious misinformation as is embodied in the statement that a child of any age who has no more than four teeth should be restricted to a fluid diet, it is time that medical men awakened to a deeper interest in nutritional and dietetic problems. Such awakened interest is needed to enable the profession to combat fallacies of this sort, and if the interest is gained the reward will be an added power for good work in the prevention of disease.

A simple catalogue of possible improvements in the treatment of sick children could easily run beyond the bounds of this paper, and hardly do more than touch the limits of the subject. To mention all of the possible ways and means that might aid us to improve the diagnoses of those children's diseases which so often trick us into error might well fill a volume.

Primarily, however, it is true that the better diagnosis will be made by those who remember that children, as children, possess positive anatomical and physiological peculiarities. Failure to recognize this fact leads to improper treatment. These essential peculiarities impose a special routine for the physical examination of children, quite unlike that best adapted to adults.

John Thompson, one of the wisest of those who write about sick children, has pointed out that in the examination of a child, the best information is not to be had by exploring one physiological system after another as is normally done in the investigation of adult ills. Much more valuable is a procedure based upon the use of one method of physical diagnosis after another. The most important of these methods is proper inspection.

Many a regret would have been spared had it never been forgotten that a child should always be completely undressed for a physical examination, but the child who is beyond infancy should not have its clothes taken off in the presence of the doctor. If the wilful, egocentric baby of from one to three years who struggles and screams at the slightest provocation is undressed in a room apart from the physician, and wrapped in a blanket or gown that opens down the back, he can be examined more easily. He can be brought in to the examining room on the mother's or nurse's shoulders, and with his back toward the doctor, sometimes before he is even aware of the physician's presence, the head, ears, skull, back, buttocks and legs can be inspected.

The physiological peculiarities of the well child are paralleled by a series of marked and equally significant pathological alterations in the case of those who are ill. These alterations bring about expressions of disease, and disease peculiar to children. The same sorts of pathological agents may produce clinical pictures in sick children different from those they bring about in adults; so different, in fact, that sometimes it is hard to believe the causes of the sickness identical. Then, too, certain maladies are prone to attack children, and others quite commonly found among adult patients are so rare in early life as to be curiosities. Acute rheumatism, for instance, is almost unheard of in a child younger than three years, yet scurvy, common in the second and third years of life, has been mistakenly called rheumatism.

In examination of the infant, complete and searching inspection is more richly rewarded than is any other single means of eliciting information. The facts derived from inspection taken in the light of the history of the patient's indisposition, and with a due consideration of the natural history of disease in childhood often suffice for diagnosis, although other indicated physical and laboratory means must not be neglected. It is certainly no exaggeration to say that diagnosis could be bettered if every one who deals with sick children would devote more time to a study of the possibilities of inspection.

The position in which the child carries the head may reveal information of much value. If it is retracted, it at once suggests postcervical adenitis, which may be the result of an infected adenoid, or be a part of a retropharyngeal glandular infection, or, less frequently, it may signify a meningitis. Held to one side, the idea of an immobile torticollis or of the unusually occurring cerebellar tumor may be brought to the mind of the observer, and give him a lead. In a like manner, the child flushed with fever who protects one side of his head with the hand or by pressure against the mother's shoulder, will afford a clue which makes thorough search of the ears and mastoid imperative.

Amount and quality of the hair at once mark the state of the child's nutrition and, together with the character of the bony development in the frontal and parietal regions, give information which will reveal or exclude rickets. A look at the occipital scalp of a bed-ridden child, who has been the victim of an unexplained fever with distress, sometimes reveals the cause of the pyrexia to be a furuncle hidden in the hair, which may have been overlooked because the physician himself has not sooner raised the back of the child's head from the pillow for scrutiny.

The bulging fontanelle, the separated sutures and the peculiar eye appearance of the hydrocephalic are at once apparent, and not less noticeable is the wedge-shaped insufficient vertex of the microcephalic with the blank, staring faces beneath it.

The expression of the child's face usually reveals at once whether the mother's anxieties are justified by the real sickness, or unjustified and merely the result of her ignorance and the child's naughtiness. The anxious-looking baby with a flushed face, an obliquely held eyebrow, a slightly open mouth, the fluttering wing of whose nostrils suggest pulmonary involvement, demands prompt and thorough chest examination.

The puffy face that goes with renal disease is distinctive, but puffiness may also mark giant urticaria. Quite diagnostic is the trismic smile,

earliest sign of tetanus, and equally informing, the weary, aged faces that develop in the course of a protracted disease such as chronic diarrhœa, peritonitis, empyema, and the low-grade osteomyelitic infections. Nor is the dried-out aspect of the baby who is subject to an acute attack of vomiting and diarrhœa, open-eyed, staring, with depressed fontanelle, and hollowed cheeks to be mistaken any more than the peculiar look of sage thoughtfulness, with shut eyes, slightly retracted head, and close-clenched jaws that mark the chronic meningitic. These are almost as recognizable as the open-mouthed appearance of nasal obstruction. One important revelation that sometimes rewards inspection is the discovery of an edema about the mastoid region. When one ear is forced away from its normal relation to the scalp and head, and, when looked at from behind, occupies a position quite unlike that of its fellow, underlying mastoid-cell infection may be inferred, although it must never be forgotten that the same sign may result from a single abscess of the postauricular glands. Such an abscess is a not infrequent complication in the presence of abrasions of an unclean, it may be a pediculous scalp. The swelling in front of the ear overlying the upper part of the parotid and the zygoma is as important an index of mastoid involvement as bulging behind the ear, and such swellings mean that there is an imperative need for surgery.

A look at the torso of the naked child may be equally informing. It is astonishing how easily even slight degrees of difference in the chest movements of little children may be discovered, but the light must be bright; it must fall equally and unshadowed, while the observer should stand at some distance behind the patient. A scrutiny of the front of the chest to note the position of the apex beat, percussion and radiography in order will confirm the suspicion that fluid is in the pleura or reveal a consolidation, unless some rarity such as sarcoma is complicating the findings. Inspection that reveals the slightest limitation in the flexibility of the spine justifies suspicion of spinal caries. The usual child is a wriggling, restless creation, and its flexible spine is invariably making some twist or other. A history of pain in the belly, or of pain developed by jarring, makes it doubly probable that early Potts disease is present. This malady brings with its full development such hideous crippling that the physician alert for his patient's interest must keep its possibility always in mind, because often, if diagnosis is made early and proper treatment is promptly adopted, the disease can be checked.

Through frequent and careful oversight of the spines of the children who come to him, the general practitioner may discover curvatures and postural defects, and by measures of corrective gymnastics overcome such defects while they are easy of correction. It is doubtful if any single division of pediatric endeavor will better reward the general practitioner than a study of the application and principles of corrective and prophylactic gymnastics, a study which will enable him to restore normal posture and to improve the nutrition of children.

It would pass the bounds of this paper to catalogue all that is to be learned from inspection of the extremities, especially of the hands, or from simple observation of the abdomen.

There are certain children's diseases readily to be recognized because the appearance, attitude and expression of the patient testifies to their presence. Of these, two, infantile scurvy and mongolism, sometimes reach the hospital unidentified or misdiagnosed. In appearance, the sufferers from scurvy are pale, irritable, with pain expressed in every feature. They lie in a state of pseudoparalysis, inert, with the thighs drawn up, guarding one or both legs, or perhaps an arm from movement or interference. Perhaps with bruises here and there on the skin, sometimes with a one-sided proptosis, the result of a hemorrhage, which has invaded the subperiosteal region of one orbit. Other subperiosteal hemorrhages usually of the long bones, but especially of the femurs, may be present and palpable. When there are erupted teeth or teeth about to erupt, the gums are spongy, swollen, and ecchymotic; too often sloughs may be found, sequels of a mistaken resort to that ancient barbarity, the gum lancet. Such a clinical picture is pathognomonic. Not less so is the typical history of an infant too long fed and too exclusively fed on cooked food, usually boiled, condensed, commercially pasteurized or dried milk, or on some proprietary preparation without the compensation of vitamine-bearing substance such as orange juice, green vegetables, and cod liver oil. For a long time the little patient has been pale, irritable, capricious in appetite, resentful of even the gentlest handling. As the days and weeks passed, such symptoms increased in intensity, and it was noticed that the child bruised easily, and one day developed swelling about one or another joint. The baby later fell into the condition of pseudopalsy, which brought the parents to their doctor for advice. No other disease of childhood much resembles this quite common malady, and yet, not infrequently, it is mistaken for rheumatism, an affection so rare in early childhood that it can truthfully be said not to attack before the third year. Sometimes these infants fall into the hands of osteopaths and chiropractors, whose manipulations are especially torturing to the tender flesh of the scorbutic.

Mongolism, a condition that comes with obvious mental deficiency, deformed head, ears, and nose, chubby hands and feet, seems often to be confused with cretinism, a physical state in which these peculiarities are also to be found, but the slant eye, smooth, fine skin and fine, sparse hair, and extreme hypotonicity of the mongol, mark its condition as one apart from cretinism. For, in cretinism, the hair is scant, it is true, but coarse. The skin dry and rough, the eyes are normal in shape and position, and hypotonicity is not a feature. A cretin shows besides these features its chubby hands, its myxedema, the aged expression of its face, and peculiar distribution of its sub-

cutaneous fat pads. The subnormal temperature, and the extreme constipation of the child are added points that distinguish the hypothyroid patient, and indicate the need for thyroid feeding.

Quite often, pyelocystitis, commonest cause of fever and malaise in girl-babies is overlooked. Doubtless, this oversight comes because its great prevalence between the eighteenth and thirtieth months of life is forgotten, and perhaps, too, because it is thought a difficult matter to obtain urine samples from young girl patients. It is always possible to catheterize a girl child, and if scrupulous surgical cleanliness is insisted upon no harm can follow. W. P. Lucas has made it possible to obtain urine from girl-babies as easily as from boys, by his discovery that the ordinary cheap glass bird-bath to be found on canary cages is a utensil perfectly adaptable as a urine collector. Such a glass bath can be sterilized, and then be applied to the vulva and fastened in place by the pressure of the pinned diaper. The routine use of such a device will make it possible always to examine the urine of girl-babies, and to render the diagnosis of urinary disease generally possible. For collecting the urine of a boy, nothing is better than a rubber glove. The boy's genitals can be included within the wrist of the glove, which is to be fastened in place by adhesive plaster.

Another rather common disease, hypertrophic pyloric stenosis is a disorder with a distinctive clinical picture, yet it sometimes eludes diagnosis, a misfortune for its victim, for when diagnosed early the treatment by dietetic or operative measures is almost uniformly successful. If every physician would make it a rule to make thorough inspection of the complete, naked bodies of his baby patients, no instance of pyloric stenosis could escape detection, especially if in addition the inspection of the infant's abdomen were made while the child was nursing. Under these circumstances the very characteristic epigastric wave produced by the contracting stomach is easily seen as it passes across the upper abdomen, running at the rate of about twenty contractions to the minute, and equally visible and as striking will be the peculiar, huge, bulging, epigastric area in its contrast with the narrow flattened hypogastric region. Such findings in the case of a constipated baby who began to vomit between the second and fifth weeks of its life, and who continues to vomit persistently and explosively, who passes little urine and shows the results of fluid loss should be enough to rescue the little one from protracted attempts to find a suitable diet. One diet only, the thick, gruel milk feeding holds any promise of help for such a patient. If this fails to check vomiting and to initiate gain within a few days, then a recourse to the Fredet muscle-splitting operation is indicated. With proper surgical technique, provided the patient is not already moribund, this operation is almost certain to be crowned with success.

A more general realization that spastic paraplegia and spasticity, with mental defect, many times are referable to injuries from too prolonged labor rather than from damage by the forceps which terminated the labor, or to the blood dyscrasis which it is now popular to blame, and that earlier resort to forceps, or, if need be, to Cæsarian section, might be productive of much good to childhood were it more encouraged among those general practitioners whose work includes obstetrics.

It may be said that the practitioner or specialist can improve the diagnosis and the treatment of disease in children in just the same way that he can improve the diagnosis and treatment in any other department of his practice by keeping himself well informed about the bases of medicine, as well as about the peculiarities of the special work. It may be that the fate of many a child would be bettered if we were more critical in the selection of patients for tonsillectomy. The fact that brilliant results follow the removal of diseased or obstructing tonsils is no warrant for the idea that every visible tonsil is a criminal to be forcibly guillotined or guilefully snared to its destruction, and the disillusionment of physician and parent would be less were it more clearly recognized that there are other common causes of persistent mouth breathing than adenoid growths, and that the mere removal of these when present will not make it possible for the child with a high arched palate, deviated septum, enlarged turbinates and anterior rhinitis to breathe through its nose. For a remedy of the high-arched palate we must turn to the orthodontist. The changes in the anterior nares demand long, patient, and painstaking treatment after the removal of the tonsils and adenoid. Not only this, but the general condition of the patient must be improved. Long before tonsillectomy came into vogue, Iodide of Iron was a potent remedy which, together with proper feeding and hygiene, put many a child in condition to fight off the ill-effects of enlarged tonsils or infected adenoids, and used in the same way, it still is potent as an adjunct to the local measures indicated after the removal of an adenoid and tonsils.

Not only for orthodontic aid do we need to call on the dentist. Decay in deciduous teeth most often comes first to the attention of the attending physician. To him also comes the convincing evidence that the care and filling of this early set of teeth is one of the most fruitful prophylactic measures at his command. Unfortunately, he will have to struggle not only to convince indifferent parents, but to overcome the active opposition of dentists, many of whom are unwilling to give their time and detailed work to the preservation of temporary teeth. Fortunately, the dentists of the present generation are coming to their task with a training that makes them able and willing to help the physician in this matter.

Diseased tonsils, bad teeth, nutritional disturbances, and faults of hygiene make up a list to plague those of us who deal with children, but tragedy rarely attends among these, but there are afflictions swift and terrible in their onset for which we must ever be on the watch lest death

catch us unawares and carry off our patient before we sense the danger. Every sick child should be to us a possible victim of these deadly things until we have excluded them one and all—diphtheria, bowel obstruction, appendicitis, especially intussusceptive; mastoiditis, retropharyngeal abscess, early Potts disease, dysentery, typhoid—fortunately, there are not so many. All of them we should have in mind, and their earliest known signs and symptoms should be as familiar to us as the letters of our alphabet. Not only so, but in our reading we ought always to be especially on the lookout for new information about these deadly enemies of childhood.

For the diseases of children this can best be done by knowing well how to refer to late editions of standard books, and a good journal or two such as the American Journal of Diseases of Children, and the "Archives of Pediatrics" should find a place on every practitioner's desk. The perusal of such journals and books kept handy for ready reference will elucidate the peculiarities of physiology and pathology which make the manifestations of disease in juvenile patients so perplexing, especially to those who approach children as if they were adults with an adult psychology and adult types of pathological disturbances. The knowledge so gained will emphasize the need for special methods of attacking problems of physical diagnosis and for special information about the peculiar natural history of certain common diseases as they affect children. Moreover, such a plan will clear many of the problems of infantile nutrition and bring a juster appreciation of the influence of personal and school hygiene.

240 Stockton Street.

OSTEOPATHS USE A PLUMB-LINE AND SPIRIT LEVEL TO FIND A PERFECT SPINE

(Quoted from the San Francisco Examiner of Sunday, April 2, 1922):

"We feel sure that there is no such thing as a perfect back in existence. Almost every person can remember having at least one fall or twist or accident that at some time or other wrenched or twisted their spine so that they were laid up or uncomfortable for a day or more. These are all recorded in the spine. . . . The quite astounding fact seems to be that brunettes have better backbones than blondes. That is, the brunette average up to date has been far ahead of the blonde average."

BULLETINS OF THE AMERICAN MEDICAL ASSOCIATION

All physicians interested in the activities of the national organization, the House of Delegates or Council on Medical Education and Hospitals and other official bodies of the A. M. A., should be subscribers to the Bulletin of the American Medical Association. The proceedings of the conference of national officers and state secretaries, held in Chicago last November, will be found in recent numbers of this Bulletin. The annual subscription to the Bulletin is 50 cents, and letters should be addressed to N. P. Colwell, M. D., Secretary of the Council on Medical Education and Hospitals, 535 North Dearborn street, Chicago.

COMMON PARASITIC DERMATOSES IN SOUTHERN CALIFORNIA *

By MOSES SCHOLTZ, M. D., Los Angeles.

It is my purpose to call attention to the great prevalence of certain parasitic dermatoses in Southern California. Examination of private and clinical records convinces me that parasitic dermatoses due to ectogenous infection make up not less than 29 per cent of the total number of skin diseases.

I have deliberately omitted all rare and spectacular dermatoses, such as leprosy, granuloma coccidioides, actinomycosis, and lupus, and have limited my remarks to parasitic dermatoses that the family physician is called upon to treat in his daily practice.

This reduces the consideration to skin lesions caused by streptococci-streptodermias; those caused by staphylococci — (staphylodermias); tinea and scabies.

That these four parasitic dermatoses make up not less than 29 per cent of skin diseases merits serious attention by physicians.

It is the purpose of this paper to present these parasitic dermatoses, as they have occurred in clinical work, to review their most striking characteristics and to outline briefly their diagnosis and treatment.

Streptodermias — The most widespread of all parasitic dermatoses are those due to streptococcic infections (streptodermias). It is surprising how little streptodermic lesions are known to the general profession. Impetigo contagiosa is better known, and yet it constitutes only a very small minority of streptodermias.

There are quite a number of clinical forms of streptodermias of common occurrence. The list includes persistent intertriginous patches, cracks or fissures in the corners of the mouth—so called perleche, and similar lesions in the retro-auricular, naso-labial, axillary and inguinal folds. Another rather common form is the inflammatory patchy form streptodermatitis. It occurs in single or multiple patches, most often on the limbs or the trunk of the body and, if left untreated, may last many months and even years.

These lesions usually diagnosed as plain chronic eczema, and treated with bland, indifferent ointments, such as zinc oxide, boric ointments, and Lassar paste. Occasionally they are regarded as syphilitic lesions with which they have a considerable resemblance.

The clinical features of the various types of streptodermatas are sufficiently characteristic to make clinical diagnosis secure. The principal features are: sharply defined circinate borders of deep dark red color or occasionally suggesting violaceous. The lesions feel soft, with a soft, thin crusting. Itching is slight or absent; infiltration is never as deep as in syphilis, and the surface is never harsh and rough as in plain eczema. An important differential feature is that common

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eczema always has ill-defined borders and diffuse vague outline. Whenever any part or the whole eczematous patch begins to show sharply defined and circinate borders it is a safe indication that a secondary infection of streptococci, staphylococci or seborrhoic contagium is present.

The treatment of the streptodermias is very simple. Washing and removing of all crusts and deposits is the first and the most important step. Mercury amoniate ointment 2-5 per cent acts as a specific in almost all patients. Exceptionally it fails, and then sulfur and salycilic acid of the same strength in ointment is indicated. In cases of streptodermatitis with any amount of infiltration due to secondary eczematization I prefer to use crude coal tar ½ per cent in Lassar paste. In generalized and extensive cases ultra-violet light exposures are a most powerful and elegant method of treatment.

Staphylodermias—As a diagnostic problem staphylodermias are much simpler than streptodermias. In pure cultures staphylococci are apt to produce follicular lesions, such as folliculitis, furuncles and carbuncles.

Sycosis staphylogenes—Among various staphylodermias sycosis deserves special mention because of its chronicity, rebelliousness to treatment and the great distress caused by it. Diagnosis should not be difficult and should be made essentially on the presence of discrete or confluent follicular abscesses limited to the hairy part of the face. From a therapeutic point of view it is important to remember that in sycosis, as in tinea capitis, the parasite nests at the bottom of the hair root; hence, no treatment short of epilation can give lasting results. The painful method of pulling hairs one by one with the forceps should be superseded by X-ray epilation. After epilation is effected in sycosis, antiseptic ointments and washes are used before the new hair comes in. With the hair follicles open, antiseptic local applications easily penetrate to the seat of infection and effect a lasting cure. Staphylococcic vaccines, autogenous or stock made, are efficient and strongly indicated in furunculosis and carbunculosis, but they are very uncertain and unreliable in sycosis.

Tinea—In its various forms tinea occupies a place among parasitic dermatoses second only to streptodermias. The prevalent notion that the so-called ringworm presents always ring-like lesions with a clearing center and active edges is erroneous. Only a very small minority of tinea lesions, probably those due to a certain strain of fungus, is of ring-like shape. Diagnosis of tinea of the body is made clinically on the presence of sharply defined borders—dry, scaly deposit on an inflammatory or non-inflammatory base, superficial slight infiltration, or none at all, round, circinate or segmented shape and extension by continuity. While the presence of the fungus by microscopic examination constitutes a decisive test, it is necessary only in the exceptional cases. In the overwhelming majority of cases a clinical diagnosis is possible. In tinea of the scalp the additional clinical evidence is the presence of patchy alopecia hair stumps of dull, dusty, and lifeless appearance, together with weakness and brittleness of the hair. Tinea of the scalp is not more prevalent than other types, but from a therapeutic and social point of view it presents a grave problem because it affects mainly children of the school age and often keeps them out of school for many weeks and months. The choice of antiparasitic application is of little importance; sulfur, salycilic acid, mercury, phenol, all clear up and improve the surface of the diseased area. The best application is 3-5 per cent solution of chrysarobin in traumaticin. The reason for the stubborness and tendency to relapses of tinea of the scalp is that none of the local applications reach the bottom of the hair follicles while the hair is in. For this reason the chronic stubborn generalized cases of tinea of the scalp can be radically cured only by X-ray epilation. The hair grows again from two to four months. After epilation antiseptic applications are kept up on the bare scalp to destroy the rest of the fungi. Tinea cruris is the next in frequency. The interesting feature of this type is that, while it occurs like its counterpart on the hairy parts, the hair, unlike those of the scalp, remains unaffected. This is because the fungus in these places remains on the surface and does not penetrate inside of the hair follicle. For this reason tinea cruris can be cured with various antiparasitic applications without epilation. For the same reason tinea cruris does not produce patchy alopecia and does not alter the vitality and the appearance of the hair. However, the treatment of tinea cruris presents its own difficulties. The first one is the extreme tenderness of the skin of the genito-crural region. It is rather difficult to select a strength of antiparasitic application sufficient to destroy the fungi and yet not strong enough to irritate the skin. It is quite common to see patients with tinea cruris with the skin acutely inflamed or actually blistered by the local medication. The most efficient and elegant treatment of tinea cruris is radiation with ultra-violet rays from a good quartz lamp. The specific virtue of ultra-violet rays in these cases is in an even diffusion and penetration of the rays in all the irregular lesions as well as in covering a large area beyond the visible borders of the affected area. With daily exposures to quartz lamp, antiparasitic applications can be dispensed with. The reaction from the radiations should be brought to a distinct erythema and exfoliation. Blistering is not advisable, though it does no harm.

Tinea axillae is much rarer than tinea cruris. The treatment of both conditions is identical.

Tinea of the toes has been lately subjected to considerable study, and its clinical types are quite well established. Bacteriologically, it has been identified as being caused by an Epidermophyton. The most common location is between the toes and the soles. Clinically, it resembles very closely ordinary intertrigo, vesicular or squamous eczema, pompholyx, and pus infection. Accurate diagnosis can be made only by bacteriologic methods. But in the majority of cases it can be recognized clini

cally, or at least suspected by lesions showing well-defined circinate margins, epidermal collarettes, and spreading by extension. The treatment is the same as in other types.

Scabies—Scabies seems to be so simple and so well defined as not to admit of errors or confusion in diagnosis. Yet it is surprising how many cases of scabies remain unrecognized. There are several sources of errors. The first is the prevalent notion that scabies is a disease of slums and that it does not occur in good society. Many physicians on that account are prone to overlook scabies in their well-to-do patients. I have seen almost as many cases of scabies in private practice as in the clinics. Another source of error is due to mild or abortive cases of scabies which are usually seen in cleanly people and families. In these cases lesions are very insignificant and may consist of a few widely scattered top-scratched papules, presenting very little resemblance to well-developed cases of scabies. Such cases may be mistaken for eczema, and in children they are frequently mistaken for a food rash. The true nature of these cases can be readily identified by the following clinical features: the papules are not inflammatory, top scratched and hemorrhagic. They are discrete, and show no tendency to run together into ill-defined inflammatory areas, as in eczema. They are located preferentially on flexor surfaces on widely scattered parts of the body. The burrows may and may not be seen. Secondary eczema and impetigino-like lesions are particularly common in children and individuals with a tender and irritable skin. These secondary lesions may dominate the clinical picture to such extent as to mask completely the underlying primary condition of scabies.

The treatment of scabies is simple enough to be standardized. Sulfur 5-10 per cent alone or in combination with tar and green soap, in the form of Wilkinson ointment, is a specific. Two points, however, should be kept in mind to avoid mistakes. The first is to guard against sulfur dermatitis or sensitive skins by stopping treatment at a proper time. The second is a possibility of the persistent complaint of itching in neurotic individuals after an apparent clinical cure.

CONCLUSIONS

Ectogenous parasitic dermatoses are very common in Southern California. They make up about 30 per cent of the total number of skin diseases.

The most widespread in the order of frequency are streptodermias, tinea, scabies, and staphylodermias.

A more thorough isolation of skin lesions caused by streptococci, staphylococci, tineae, and scabies should be enforced in schools and in homes.

A sanitary inspection of domestic animals, particularly dogs and cats, in all homes where cases of tinea are reported, is highly desirable, as these animals seem to be the main agencies in spreading tinea.

Cases of tinea and scabies should be reportable.

(Brockman Building, Seventh St. and Grand Ave.)

FACTORS CONTRIBUTING TO SUCCESS OR FAILURE IN GROUP MEDICINE

By E. V. FREDERICK, M. D., Reno, Nevada

Why do medical men attempting to work together in a group sometimes fail? William Mercur of Pittsburgh in a personal communication says:

"I have been investigating the subject of group medicine for the last ten years and my report is based on the forty-three failures out of the forty-five groups I have investigated. My opinion as to the causes of failure are: (a) Based on wrong ideals; (b) Improper selection of staff; (c) Organization defects; (d) Use of voluntary workers (applying to charity clinics)."

The basic thought in medical ideals is better service to the public. Group work aims to accomplish this by greater accuracy in diagnosis; by eliminating errors; by checking up and minimizing the weaknesses and peculiarities of the individual diagnostician; by massing an equipment, the most important part of which is brains; by utilizing the services of technicians and lay assistants and mechanical and laboratory equipment; and by specialization in treatment.

Group practice also aims to provide better service to the public through a scientific handling of the rest and fatigue of the staff, thereby giving them time for reading, recreation, or post-graduate study; and by unloading petty and aggravating detail from busy highly trained specialists to lay helpers trained to handle these matters.

Wrong ideals are primarily responsible for the failure of some groups. Some groups are formed primarily for financial gain, which may be secured by a number of well known activities based upon business ethics but out of harmony with the highest ideals of the medical profession. Groups of this character usually fail because they fail to secure the confidence and respect of their colleagues, without which neither the individual nor the group can progress far; and they also sooner or later lose the confidence of the public.

False ambition and egotism invite failure. Some physicians have the mistaken idea that a group of general practitioners makes a clinic; that a general practitioner joining a group becomes a specialist, entitled to a specialist's fees overnight, and what was an ordinary opinion under one circumstance becomes the opinion of a specialist under another and worthy of an increased fee.

Improper selection of a staff or ignorance of the qualifications and type of men required for successful group work is another chief cause of failure.

Excluding the groups formed around one prominent man by his assistants; by a father and his several sons, all members of the profession; the partnerships of brothers with a paid understaff, and similar organizations, how can a number of ordinary medical men work together successfully to the benefit of their patients and themselves without inviting failure?

The primary difficulty in forming a group of this character is that no one wishes to admit the leadership of another, and the attempt frequently is made to function with all the staff equal in

management. Any such group is certainly doomed to failure because they are attempting the impossible. A directing head is absolutely necessary if success is to follow and to insure that the individual labors of each member of the group shall be utilized in the attainment of common results. This one-man control, although essential, also has its disadvantages and may lead to abuses of authority. The form of organization that is practical and just is one in which the entire responsibility is placed on one person of the group with provision for certain checks by which his work is susceptible to review by other members of the organization.

The greatest problem in any group organization is to find a directing head. Such a leader must fulfill the following requirements:

(a) He must have a personality which will not antagonize his equals and which his superiors, if he has any, will respect and his inferiors honor.

(b) He must have a wide knowledge of men and women and how to organize, energize and inspire those who are his co-workers.

(c) He must be trained in the principles of scientific management so that peak loads will be avoided in the group's work.

(d) He must be well acquainted with methods of finance to carry the organization over the bumps which are sure to arise.

(e) He must have an expert knowledge of the "clinic" system of clinical routing and "check-up" system of diagnosis and interdepartmental consultation, so that he can guide the internal machinery of the staff.

(f) He must be fairly well grounded in laboratory work so that he can veto unnecessary foibles which increase overhead beyond income, or so that he can introduce into routine procedure valuable methods which will bring income above overhead.

(g) He must have knowledge of the method of keeping an up-to-date "Procedure System."

A MANAGER WITHOUT ALL THIS KNOWLEDGE IS A BLIND MAN LEADING THE BLIND AND THE GROUP IS SURE TO END IN FAILURE

Even with a perfect directing head and a number of specialists the professional staff may still fail to function as a group because of lack of special training for group work or unwillingness or inability to overcome individual habits. Successful group work is a specialty in itself.

Causes of individual failure are:

(a) Inability of old dogs to learn new tricks or unlearn selfish habits.

(b) Inability or unwillingness of the individual to change from a memory system of records and case histories to an extensive paper system with considerable time-consuming detail.

(c) Failure to properly co-operate with other members of the group in the production of "team work."

As Kipling says:

"It ain't the guns nor armaments
Nor the funds that they can pay,
But the close co-operation
That makes them win the day.
It ain't the individual
Nor the army as a whole,
But the everlasting team work
Of every bloomin' soul."

(d) Desire of the individual to push his fads and foibles.

(e) Ignorance of "Clinic" diagnostic routing and laboratory "check-up" systems and inability to reduce all data to complete diagnoses. In this regard Louis Wilson says: "Unfortunately, it is true that the average training of the clinician of today is sadly defective on the laboratory side. . . As a result, when there comes to him concerning a patient the data furnished, say, by a complete examination of the urine, by an examination of the blood, by an examination of the gastric contents, by an examination of the feces, by a fluoroscopic examination of the alimentary canal, by a bit of tissue clipped from one point, he is wholly unable to assimilate, to co-ordinate and to interpret the data obtained."

Having found a satisfactory directing head and a good team working medical staff, the next important item in group organization is the choice of the understaff and lay workers, as bookkeepers, secretaries and technicians.

Success in this respect requires careful thought in numbers, personalities and salaries that will not produce too high an overhead. Each one should be trained not only in their own line of work, but as an understudy of some one else, so that when one is ill or drops out, the work will still go on efficiently. Their work must be so arranged that all are busy during the day, and yet so that none are overworked. All assistants must be kept inspired and happy in their work.

The tripod on which any organization rests is management, policy and finance.

A group should have a managing board to fix policies; to check and stabilize the manager; to guarantee to the public the "morale" of the organization; to referee disagreements about finance or other difficulties between members of the staff.

Many groups fail because they have no defined policy. A policy ill defined or based on wrong ideals is as bad as none. The policy should be decided before organization is completed and before any money is spent on buildings or equipment.

Some of the common questions to be settled in determining the policy of a group are:

(a) To have a directing head or not. If so, what are his powers?

(b) To have a directing board or not. If so, what will be its powers?

(c) Will this board be composed of outside laymen or medical men within the group, or both?

(d) What types of practice are to be included?

(e) Is the group work to be limited to diagnosis, or include diagnosis and treatment?

(f) What attitude to be adopted toward venereal, neurotic, chronic and other special types of patients?

(g) To grow indefinitely or to an ideal size?

(h) To work for charity or to make the staff wealthy?

(i) What ideals and objects are to be striven for?

(j) What attitude toward other members of the medical profession?

(k) To be ethical, ultra-ethical or non-ethical?

(l) What relation toward the public, how to get and retain their patronage?

(m) What type of propaganda, education and advertising, if any?

(n) Promotion and direction of members of the staff; how made and by whom?

(o) Separation of members of staff for improper conduct, how arranged?

(p) What hospital connections to be established?

(q) To seek religious affiliations or not?

(r) What percentage of net income for charity, if any? How shall it be spent?

A crucial part of the policy is the settlement of the questions of finance.

How shall fees be arranged? How divided? How collected? What recompense for a member discharged? What recompense for a member retired for illness, long service or old age? Where will the money come from to cover loss during the first year or so or during hard times?

Many groups are started by one or two enthusiasts who gamble on the cost of building or equipment and trust to Providence that a policy bringing success will arrange itself by trial and experience. But, unfortunately, during one of these trials the corporate body dies before it gets the experience.

In group work friendship must be regarded as a bridge of straw. Only one tie can be relied on—cold cash. If this is unsatisfactory, all else will go to smash.

A fundamental principle in business, one which is difficult for doctors to grasp, must be remembered. The business and the individual are two separate and distinct entities even in private practice. The business employs the physician or surgeon and pays him a salary as manager of himself. He may also be bookkeeper and stenographer and what not. In group work the organization employs someone else to handle some details, while the doctor specializes on others.

Advertising is another important part of policy. Here I am getting on dangerous ground. But whether we like to face the fact or not, this rule is true—that the success or failure of a group depends on the superiority of its advertising. Please note the full significance of the word "superiority," not quantity but quality, which always must be of an ethical character.

A group advertises ethically:

(a) By the high qualifications of its staff, their social position and activities, and likewise of their families.

(b) By the high standing and reputation of the managing directors.

(c) By the nature of the offices, their appointments, furniture, equipment, and the type of clerical assistants.

(d) By the courtesy of all persons to patients, their friends, and particularly to other physicians.

(e) By the efficiency and honesty employed in diagnosis, prognosis and other professional services, as well as by the percentage of cures and the psychological satisfaction given the public.

(f) By the staff's relation, activities and co-operation with their fellow physicians and with charitable institutions.

(g) By research work.

(h) By medical papers read and published.

If actuated by the right spirit the staff will keep itself so busy with ethical propaganda that the members will have little time to be unethical.

CONCLUSION

We may safely conclude that a group of medical men with a variety of training, actuated by right ideals and willing to work and co-operate; managed by a directing head properly trained; working under a sane business and professional policy; with finances arranged to give satisfaction to the workers and sufficient backing to carry them through storms; proper contact with the public in such a manner as to insure confidence; followed by actual results in diagnosis and treatment such as the people demand, a group will succeed. But like a ship at sea, one leak will be sufficient to sink it.

THE USE OF BASIC DIETS IN THE TREATMENT OF NEPHRITIS *

By W. D. SANSUM, M. D., Santa Barbara.
From the Potter Metabolic Clinic of the Santa Barbara Cottage Hospital, Santa Barbara, Calif.

SUMMARY

By the employment of what we are pleased to call a "basic diet," the urinary acidity may be easily reduced to a pH of 7.00 or better.

On such diets patients with chronic interstitial nephritis appear to improve, as evidenced by a decrease in blood pressure, albumin and casts in the urine and other symptoms of nephritis and arterial hypertension.

Before discussing the dietary management of nephritis, it will be well to review briefly the various forms of nephritis. Strange as it may seem, authorities have not agreed on a definition for nephritis. Even Osler, with all his clinical experience, avoids the issue by giving no definition. Henry A. Christian defines nephritis as a diffuse, progressive, degenerative, or proliferative lesion, involving renal parenchyma or interstitial tissue or both.

For practical purposes, however, the presence of albumin in the urine of kidney origin is the most reliable sign of nephritis. The phrase "of kidney origin" is inserted because too frequently a hasty, incorrect diagnosis of nephritis is made whenever albumin is found in the urine, regardless of its source. Urine from a female patient may contain sufficient normal, vaginal secretion or desquamated epithelium to give a distinct test for albumin. Clean or even catheterized specimens of urine should be examined before judgment is finally passed. Even catheterized specimens of urine, in cases of cystitis, may contain sufficient pus to give

* Read before the sixty-sixth semi-annual meeting of the Southern California Medical Society, held at San Diego, April 7, 1922.

a test for albumin when no nephritis is present. A careful, serious attempt should, therefore, be made to be sure that albumin is present, and that in all probability the albumin is of kidney origin. The diagnosis of so serious a disease as nephritis in a patient should not be made hastily, but only after all the evidence has been examined and carefully weighed.

Granted a urine containing albumin, the problem which presents itself first is the type of nephritis present. In the final analysis, there appear to be four chief types of nephritis. Without sub-classifying further, and without discussing the mixed types—for a single person may have all four types at once—let me present a classification briefly, with a clear picture of each uncomplicated type:

1. Simple albuminurias, transient in nature, with no gross lesions in the kidneys.
2. Parenchymatous nephritis, involving primarily the parenchyma, i. e., the glomeruli, the convoluted tubules, the loops of Henle and the collecting tubules.
   (a) Acute which becomes
   (b) Chronic if the etiology factors continue for a long enough period of time.

(This is the wet type of nephritis first described by Bright.)

3. Chronic interstitial nephritis, in which the blood vessels of the kidneys are primarily involved, together with varying degrees of blood vessel involvement all over the body.

(This is the dry type of nephritis first described by Bright.)

4. The surgical kidney, i. e., tuberculosis, pyelitis, abscesses, tumors, and stones.

Except for the addition of the albuminureas, this is the classification advocated by William J. Mayo.

This classification differs only in minor details from that advocated by Henry A. Christian, for he divides chronic nephritis into the wet forms without increased blood pressure, the dry forms with increased blood pressure, and the mixed forms.

He discusses essential hypertension in a separate section because of the minimal lesions sometimes found early in the kidney; but states that this condition progresses into chronic, interstitial nephritis.

(1) *Simple albuminuria,* transient in nature, and with no permanent, gross lesions in the kidney. Osler's detailed discussion of this condition is so well known that a repetition is unwarranted. Aside from the albumin in the urine, there are usually no symptoms referable to a nephritis. The patient is promptly cured when the systemic infection runs its natural course or other causes subside.

(2) *Acute parenchymatous nephritis.* This, according to Osler, is an acute, diffuse nephritis, due to the action of cold or of toxic agents on the kidneys. Infections of the tonsils, teeth and sinuses, scarlet fever, acute syphilis, septicemia, and chronic suppuration cause by far the greatest number of cases of this type of nephritis. The toxemias of pregnancy probably rank second. Extensive skin diseases, extensive burns, carbolic acid, turpentine, and mercury are occasionally found as etiological factors.

The kidney, in the beginning, is a large, red kidney. A generalized edema is usually present; there is a large amount of albumin in the urine with many casts, and very frequently red blood cells. The blood pressure is practically normal, except in the toxemias of pregnancy. The blood chemistry is normal, unless a temporary anuria is present. The attack may entirely subside if the infection is cured or the toxic substance removed. If the etiological factor remains, this type of nephritis passes from the acute parenchymatous type into the chronic parenchymatous type. Due to fatty changes from malnutrition, the kidney becomes a large, white kidney, which may become progressively smaller as the parenchymatous tissue degenerates.

Chronic tonsillitis and sinusitis, which are very apt to be overlooked, are the most common causes of this type of nephritis. Whenever a patient is seen who has had either a continuous or intermittent albuminuria, with a normal blood pressure, this is usually the type of nephritis present. So important is the blood pressure in a differential diagnosis of the various types of nephritis that this is frequently the first condition that should be inquired into. During the past year, we had two very typical cases, both in young women, who gave a history of having had albumin in the urine for a long time, and in whom a generalized edema was present on admission, and who gave a history of having had intermittent attacks of generalized edema. In both of these cases, atypical, chronic, generalized sinusitis was present. In one case, the drainage of the ethmoidal cells was obstructed by a large polyp, following the removal of which the patient's edema entirely disappeared, and the albumin decreased to a faint trace. This type of nephritis is curable to the degree to which the existing toxic source—which is usually an infection—can be removed. Both the acute and chronic forms are looked upon by Ebright as a toxemia which affects the remainder of the body, as well as the kidneys, which aids us in understanding the generalized edema.

(3) *Chronic interstitial nephritis.* The cause of this type of nephritis is unknown. It certainly does not follow the chronic parenchymatous type just described. The kidney becomes progressively smaller, with the blood vessels rather than the secreting tissue primarily involved. In this type of nephritis, the attention must be centered on the lesions in the kidney. It is a generalized disease, involving, primarily, the small blood vessels of the entire body. The symptoms depend largely upon the degree of involvement of these vessels in the various parts of the body. There is no edema. The albumin in the urine is always small in amount, and frequently is not found unless careful search is made. Hyalin casts are usually seen, but

no red blood cells. The blood chemistry becomes progressively higher as the kidneys become more involved. The blood pressure is always high. This is the most important differential point. The presence of high blood pressure, except in the toxemias of pregnancy already mentioned, regardless of how little albumin is found in the urine, and even if none is found, is sufficient evidence upon which to make a differential diagnosis of chronic interstitial nephritis. This statement is purposely dogmatic, but authors like Henry A. Christian and others, who describe cases of essential hypertension, frankly admit that eventually such kidneys will show clinical signs of true nephritis. Very frequently the patient leads an active, strenuous life with no untoward symptoms until near the end. As the small arterioles and capillaries all over the body become less elastic, it takes more force to drive the blood through them. The heart, therefore, enlarges, thus increasing the blood pressure, and eventually a stage is reached where either a diseased blood vessel breaks in the brain, resulting in apoplexy with sudden death, or paralysis; or the heart, with its chronic myocarditis, fails because it can no longer stand the increased load of high blood pressure in addition to its usual load. Sometimes the patient complains of impaired vision. An examination of the eyegrounds shows the sclerotic condition of the blood vessels. This condition is not due, however, to the kidney condition. The eye, heart and kidney conditions are a part of the general picture of arterial disease.

This is the type of nephritis which is very difficult to include in a comprehensive definition of nephritis, and eventually this disease may be classified as a distinct, arterial disease. As stated before, the etiology of this disease is unknown, and, therefore, since it cannot be attacked at its source, the disease to date is incurable.

(4) *Surgical nephritis.* There are many forms of this disease, each form depending upon the causative factor, such as tuberculosis, pyelitis, the various forms of abscesses of the kidney, benign and malignant tumors and kidney stones. In each case, the pathology and symptoms are different. The treatment is surgical. The prognosis depends upon what surgery can do for these cases. This is about the only form of nephritis which is painful. The pain in the back (of the well-known patent advertisements) is usually not of kidney origin, but very frequently a lumbago of toxic or infectious origin.

The following case report illustrates how a patient may have all forms of nephritis at once:

CASE REPORT

A woman, sixty-five years of age, who had enjoyed excellent health all her life, and who, except during childbirth, had never needed a physician, was taken acutely ill, following her fall house-cleaning. She was short of breath. The eyelids were swollen. The lips were cyanotic. The liver was tender. The legs were badly swollen. The heart was markedly enlarged. The blood pressure was 200 systolic and 120 diastolic. The urine contained large amounts of sugar, albumin, and pus. The high blood pressure indicated an advanced, arterial disease, associated with atypical, chronic interstitial nephritis.

The burden of the fall house-cleaning, added to the high blood pressure load on the diseased heart, had caused it to fail. With the first shortness of breath, there was probably a little increase in albuminuria of the No. 1 type, but as the heart failed, first an acute, then a chronic, parenchymatous nephritis developed. This accounted for the edema and the large amount of albumin, which is not seen in the pure type of chronic interstitial nephritis.

The pyuria was due to a marked cystitis and ascending pyelonephritis, probably aggravated by the diabetic condition. In addition, this patient was practically blind from the so-called albuminuric retinitis, and eventually died from a stroke of apoplexy.

This discussion has been necessarily long, but briefly let us sum up the more essential points.

Granted a patient who has had albumin in the urine for some time: If the blood pressure is high, regardless of what other conditions may be present, and even if the laboratory has failed to find albumin in the urine, a diagnosis of chronic interstitial nephritis should be made. The treatment is difficult and the prognosis is bad.

If the blood pressure is low, and the albumin has been present for some time, it is either the chronic parenchymatous or the surgical type. If there is no pus in the urine and the patient has had no pain referable to the kidneys, one can rule out most of the surgical types, leaving the chronic parenchymatous type as the most probable diagnosis.

Dietary Treatment.—In the treatment of all forms of nephritis, the first essential is obviously the removal of the cause wherever possible, and in most of the cases of types 1, 2, and 4 this can be done. In type 3, since as yet the cause is unknown, this cannot be done. In all cases, it is advisable to place the patient on the most soothing kind of diet possible. It is fairly well agreed that anything which has a tendency to keep the patient toward the acid, harsh side of life will certainly have a tendency to make him worse, whereas measures which will keep the patient on the normal, alkaline, soothing side of life will have a tendency to improve the condition of the patient, both in this and in many other types of disease. The acid-base balance of the body, its variation and regulation, has been discussed by Henderson and Van Slyke.

In terms of hydrogen ion concentration the pH of the body is 7.35, with normal variations probably in the second decimal place. The body reaction is, therefore, always slightly alkaline. Van Slyke states that, "Under extreme, abnormal conditions the pH may fall as low as 6.95, but before this point is reached it appears that coma occurs, and, from the fact that lower pH values have not been observed, it is doubtful that further decrease is compatible with life." The kidneys assist in maintaining a normal body pH by changing such substances as the alkaline sodium phosphate presented to them by the blood to the acid sodium phosphate which they excrete. The hydrogen ion concentration of the urine is one of the means

whereby the effort of the body to maintain a proper pH can be measured and indirectly indicates the dietary mode of life. A pH of 4.35, which is frequently seen in nephritic urine, indicates an acidity 1000 times as great as that of the normal body. The hydrogen ion concentration of such urine can easily be reduced to a pH or 7 or better.

The patient is given what we are pleased to call a basic diet. This is selected from the foods which are either neutral in nature, or which in the course of their metabolism tend toward the alkaline side of life. The following tables and diets have been prepared with these objects in view. They appear to explain concretely the fundamental principles which underlie the various forms of nephritic diet which have withstood the test of time.

The Dietary Control of the Acidity of the Body—There are a number of diseases which are improved when the general acidity of the body is reduced. This is especially true in the treatment of nephritis (kidney disease), high blood pressure, migraine, rheumatism, etc. This is easily accomplished by selecting the foods which are basic (alkaline) in nature. Such lists of foods have been prepared by Sherman and Gettler from ash analyses and tested in man by Blatherwick. The following tables have been prepared from their work and are now being used in the selection of basic diets:

Neutral Foods—These may be used in reasonable amounts desired by the patient unless otherwise stated.

Butter
Corn starch
Cream
Sugar
Lard
Tapioca

Acid-producing Foods — Many of these foods should not be used. A few of the less acid ones, such as the cereals and breads, may be used in the amounts specified for each case. The total excess of acidity over base is expressed in terms of cc. of a normal solution.

	Per 100 grams
Bread	2.7
Bread, whole wheat	3.0
Corn	5.95
Crackers	7.81
Cranberries	....
*Eggs	11.10
Egg white	5.24
Egg yolk	26.69
Fish, haddock	16.07
Fish, pike	11.81
Meat, beef, lean	13.91
Meat, chicken	17.01
Meat, frog	10.36
Meat, pork, lean	11.87
Meat, rabbit	14.80
Meat, veal	13.52
Oysters	30.00
Oat meal	12.93
Peanuts	3.9
*Prunes	....
Rice	8.1

* The ash of these articles is alkaline in nature, but because of the precursors of hipuric acid contained by them, they increase the acidity of the body.

Base or Alkali Producing Foods—In general, all vegetables, nuts, and fruits with the exception of prunes, plums, and cranberries are basic in nature. A partial list of such foods is given below. These may be used in reasonable amounts desired by the patient. The total excess of base over acid is expressed as before.

	Per 100 grams
Almonds	1.78
*Apples	3.76
Asparagus	.81
*Bananas	5.56
Beans, dried	23.87
Beans, lima, dried	41.05
Beets	10.86
Cabbage	4.34
Carrots	10.87
Cauliflower	5.33
Celery	7.78
Chestnuts	7.42
Currants, dried	5.97
Lemons	5.45
Lettuce	7.37
Milk, cows	2.37
*Muskmelon	7.47
*Oranges	5.61
Peaches	5.04
Pears, dried	7.07
*Potatoes	7.19
Radishes	2.87
Raisins	23.62
Turnips	2.68

* These foods have been found, experimentally, by Blatherwick to be the most efficient in reducing the acidity of the body.

BASIC (ALKALINE) DIET
Example as served

Breakfast

Baked Apple With Cream
Bacon
One Slice Toast Butter
Marmalade
Orange Juice Coffee

Dinner

Cream Soup
Baked Stuffed Potatoes Beets in Cream
Combination Salad
One Slice Bread Butter Olives
Pineapple Bavarian Cream

Supper

Escalloped Potatoes Buttered Peas and Carrots
Fruit Salad
One Slice Bread Butter
Nut Ice Cream Cocoa

Mid-meal Diets

10 A. M.	3 P. M.	9 P. M.
Milk	Fruit Juice	Hot Milk

(Note—Cornstarch is used as a thickener. Lemon juice is substituted for vinegar in salad dressing.)

Routine hydrogen ion concentrations are made on twenty-four-hour specimens of urine. A pH of 7 or better is considered satisfactory. The simple, colorimetric method described by Clark is employed.

Whenever the blood chemistry shows a retention of nitrogenous end products the protein is limited to the minimal needs of the body, about two-thirds of a gram per kg. Whenever the blood chemistry or urine shows a retention of sodium chloride the salt intake is limited.

The most satisfactory results are seen in the ambulatory cases. Many such patients are over weight. They have a cathartic colitis either from pernicious habits or because purging has been used therapeutically in the treatment of the high blood pressure. They are frequently anemic. On a diet containing an abundance of fruits and vegetables, they lose weight with no discomfort. They have from one to three soft, formed stools per day without the use of cathartics. The gastric and intestinal distresses soon disappear. The haemoglobin improves even though no medicinal iron is given. There is less albumin and there are fewer

casts in the urine. The blood pressure often falls except in those severe, terminal stages of chronic interstitial nephritis with all the typical complications.

We adopted this simple plan about eighteen months ago. A brief summary of the history of one of the first cases treated will give an idea of the results obtained.

CASE REPORT

Mrs. S. First seen December 12, 1920; age 64; weight 172 pounds. She complained of shortness of breath, dizzy spells, marked gastric and abdominal distress and a general run-down feeling. She had been taking salts each morning on the advice of her physician. The blood pressure was 210/110. Traces of albumin and hyaline casts were found in the urine. The patient was given a basic diet with the fats and sugars limited, because of her overweight. The H ion concentration of the urine was tested from time to time and found to be close to a pH of 7.0. She gradually lost weight, with no discomfort. The abdominal distress disappeared. The bowels moved normally. Some of the specimens of urine contained no albumin or casts, and the blood pressure fell as follows:

Dec. 12, 1920—blood pressure	210/110	weight 172	lbs.
Dec. 29, 1920—blood pressure	200/110	weight 171	lbs.
Jan. 12, 1921—blood pressure	195/110	weight 168	lbs.
Jun. 1, 1921—blood pressure	170/110	weight 148.25	lbs.
Nov. 1, 1921—blood pressure	172/115	weight 147.	lbs.

Patient stated that her bowels were moving normally, the gastric distress had disappeared, and that she was feeling better than she had felt for a long time.

Feb. 23, 1921—blood pressure	170/95	weight 160.5	lbs.
Apr. 20, 1921—blood pressure	160/110	weight 148.75	lbs.
Jun. 1, 1921—blood pressure	170/110	weight 148.25	lbs.
Nov. 1, 1921—blood pressurs	172/115	weight 147.	lbs.

Patient had returned from a summer in New York and Cape Cod, and had felt exceptionally well during the whole time she had been away.

April 26, 1922—blood pressure 160/105 weight 148 lbs.

Nurses Practicing Medicine in New England—Considerable interest has been aroused concerning the problem presented by nurses who have been treating injuries without having secured attendance by physicians. This matter has been frequently referred to by physicians who have felt that nurses have assumed responsibilities not warranted under our laws, and in some instances doctors have felt that the activities of nurses have in a very definite way invaded the field of medical practice, although the nurses have been sufficiently warned. Since the alleged practice of medicine by nurses has seemed to be on the increase there has been no reason why the authorities should decline to act. The Board of Registration in Medicine has tried to bring about compliance with the law without resorting to drastic measures, but reports of questionable methods have become so common and demands for action have been so insistent that it became necessary to report the facts in two recent cases to the prosecuting authorities. . . .

The whole question is complicated and delicate, but it can be solved by the nurses themselves, even though managers of industrial plants and some physicians try to induce nurses to practice medicine either as a convenience or to save expense.

The general purpose of the laws governing medical practice is to protect the patient from incompetent service, and nurses should observe the requirements because it is a law and also because sooner or later some nurse may attempt to render a service which is beyond her ability.—(Boston Medical and Surgical Journal, April 6, 1922.)

CARDIAC DYSPNOEA OR RATHER CARDIAC SHORTNESS OF BREATH

A QUESTION OF RESERVES

By HARRY SPIRO, M. D., San Francisco

In this discussion an attempt will be made to answer the following questions:

1. Is dyspnoea caused by diseased muscles or valves of the heart, and if so, why does not every patient with organic heart disease complain of it?

2. Is dyspnoea due to an edema of the alveolar tissue of the lung, and if so, is the edema always present? If it is, why does dyspnoea only show when the patient exercises and disappears almost immediately upon rest?

3. Is dyspnoea due to a lack of oxygen in the blood, and if so, why cannot these patients assimilate the oxygen of the air as well as any other person?

4. Is dyspnoea due to an improper exchange of CO_2 between the blood and the alveoli of the lungs, and if so, is this a heart or a lung fault?

5. Is dyspnoea due to an acidosis of the tissues or of the blood, and again what is the relation between the heart and acidosis?

6. Is dyspnoea due to a lack of tone or weakening, or partial paresis of the muscles of respiration like the diaphragm, and intercostals, and if so, why call it cardiac dyspnoea?

Dyspnoea, difficult breathing, or shortness of breath, will bring a patient to the physician more quickly than almost any other symptom, because it is a symptom which interferes so materially with his comfort, with his sense of well-being, and earning power. Difficult breathing is unaccountable to the patient. He may awaken in the morning feeling fine and refreshed, but the least effort makes him sit down, not because he is tired, but because he is short of breath. He may come home in the evening, eat a fairly hearty meal, and afterwards have an extraordinary amount of discomfort and shortness of breath, particularly so if he should attempt any exercise. Such, in brief, is the commencing of a chain of symptoms, which, as Facio says, are gradual, progressive and fatal. Just as this symptom is so important to the patient, so it at once becomes to the physician, because he knows that such symptoms are not imaginative. The physician recognizes dyspnoea as a distress signal, a clear call for help from the vital centers of our bodies. While it is true that shortness of breath may have underlying causes other than the heart, it is advisable to prove the heart innocent, particularly if the shortness of breath is in direct relation to moderate effort.

How is dyspnoea brought about? An individual with disease of the valves or muscles of the heart may go through life without knowing there is anything wrong. He may get sick, and get well again. He may eat, drink, smoke and work without much distress. Occasionally he does things to excess, and on such occasions the excess adds an "accumulating resistance" to the heart's action—accumulating because the additional strain has caused some partially degenerated or weakened heart muscle to give way completely, and on each such occasion a call is made on the reserve power

of the heart's muscle because it is the reserve power that has carried the defective heart to this point. If the heart hypertrophies properly—by each ventricle keeping its balance of power—well and good. If the reserve power becomes partially depleted, the strain may be greater on one or the other ventricle with the result that the hypertrophy is irregular, because one of the ventricles becomes out of proportion in power to the other.

One of the interesting episodes in the annals of medicine was the controversy between Welch and Sahli over the cause of pulmonary edema. As a result of extensive experiments both teachers were proved partially correct. Sahli claimed that edema of the lungs was caused only by some local irritant or poisoning or infection, and that if Welch was correct he was wrong anyway, because, as Sahli said, "Welch's theory did not apply to clinical cases." Welch had claimed that the edema could be caused by a disproportion between the powers of the two ventricles, resulting in a damming back of the blood in the lungs or improper circulation of blood in the lungs, and so edema was produced, and today we know that is a fact. The right ventricle may pump the blood fast enough into the lungs, but the left may not drain it out properly. If the left ventricle shows signs of distress the condition is recognized by simply feeling the radial pulse, but if the right side partially gives way, the symptoms are not so easily judged. Merely a cough and moderate cyanosis may be the only symptoms, or even if the patient is feeling fairly well, a few rales of different qualities at the base of the lungs may suggest a moderate edema of the lungs, but perhaps no severe dyspnoea yet, so we will go further, remembering how a weak heart produces edema of the lungs.

We will now consider lack of oxygen in the blood. One of the facts definitely proved during the war was that a very moderate edema of the lungs interferes materially with the proper absorption of oxygen. As with the reserve power of the heart muscle, so it is with oxygen. The blood retains a reserve supply of oxygen of about three times as much as is needed. Experiments by Lundsgaard, Steadie, and others show that the total oxygen carrying power of arterial blood is about twenty volumes per cent. We use about five and one-half per cent at rest, and perhaps ten to twelve per cent with severe effort. After rest the reserve supply is immediately replenished. If an obstruction occurs in the way of the oxygen's ready absorption, as is the case in edema of the lungs, the reserve oxygen gradually becomes depleted. The patient may go on for some time without a serious disturbance, as there is no actual lack of oxygen even after manifest injury to the lungs, because the tissues will absorb their quota of oxygen even though the supply is limited. Sooner or later, as the reserve nears exhaustion, the respiratory center in the brain takes note of it and sends out a call to the respiratory muscles for more work and faster work. Here again we see one of nature's resources, another of the reserve systems, this time called the pulmonary reserve. Actually this is the greatest amount of air the lungs can inhale after the greatest expiratory effort. Ordinarily, we utilize about five liters of air at ordinary respiration at rest per minute. This amount can be increased ten to twelve times without the person being unduly conscious of it. An increase to sixty or seventy liters is common, but there is always a return to the former level. However, in a patient with the above symptoms of insipient incompetence, resulting in a moderate edema of the lungs, the so-called threshhold is raised from five to twenty liters, and so is that much nearer the upper limits of the pulmonary reserve, and the reserve instead of being fifty or sixty liters per minute is now thirty or forty liters per minute, and so an effort that would pass unnoticed in a normal person would to one in this condition become noticed because of the increased respiratory effort needed.

The question of the actual method, not the underlying cause, of this depreciation of the pulmonary reserve or vital capacity is still under active investigation. Rooney of the Stanford cardiac clinic is now doing some work in this line, so I prefer not to discuss it, except to say that probably the air spaces may be encroached upon by the enlarged heart itself acting by compression of lung tissues and by the increased amount of blood in the lungs. The dilated veins may interfere with proper expansion of some air vesicles and so cause overexpansion of others. This, if true, may interfere with the proper draining of the residual air, and even though the respiratory rate is increased and the total air inhaled and exhaled is greater, still the oxygen is not properly absorbed. Now the respiratory center is calling on the respiratory muscles for heavier work, as a proper level of oxygen must be maintained. The respiratory muscles, while tired and probably weakened, still respond. Exhalation ceases to be a nearly passive effort and now is a severe effort, but a time arrives when the respiratory muscles produce more of the products of fatigue than the weakened heart muscles and lack of oxygen can eliminate or neutralize. This product of fatigue also is a stimulant to the already overexcited respiratory center, and the respiration on the least effort over the ordinary becomes quicker and more shallow—another link in nature's chain of defense has become weakened.

We are now in front of one of the last lines of defense which in time of development may be one of the first. It is placed last in the discussion because it is one of the last to break permanently. So far, all processes discussed were shown to depend on the question of reserves, each one of the different vital functions were shown to have tremendous reserves or the power to produce reserves, and as the reserves were encroached upon the patient's body was called upon for extra effort. In other words, extra effort takes the place of former reserves; the reserve we now face is the popular alkali reserve, the question of acidosis, the question of carbon dioxide interchange. This is called the internal respiration. Manifestly, it is impossible to condense the volumes that have been written on this subject into one or two pages.

Physiological and biological chemistry is deep water reasonably safe for Priestly, Heldane or Fisher, but not for most physicians. However, as we said, the internal respiration is the interchange between the tissue cells, the blood cells, and the blood plasma of CO_2 and oxygen, and certain acids and bases. CO_2 is an end product and is capable of forming H_2CO_3. Now, the greater the accumulation of CO_2 in the blood, naturally the more acid the blood would become, if it were not for the great alkali reserve. The blood must not become acid; if it did, death would very quickly result. Nature has provided an almost permanent alkali level, and as a safeguard to this level has provided tremendous reserve alkali and also the power to produce reserve alkali. The symbol of the alkali reserve of the body can be taken as the sodium bicarbonates. If the CO_2 accumulates too fast so that the CO_2 pressure in the blood rises, a reaction takes place between the blood corpuscles and the sodium chloride in the plasma, resulting in an absorption of the chlorine to form H.Cl., which enters the red blood corpuscles, leaving sodium free. The sodium combines with the CO_2 and forms acid sodium carbonate, so that instead of an acid condition, we really have an alkali condition in the blood; but before this interchange has taken place the CO_2 has stimulated the hypersensitive respiratory center, which calls upon the respiratory muscle for renewed efforts, and large amounts of the CO_2 are immediately eliminated. The kidneys also eliminate large amounts of the bicarbonate that is formed, so that the alkali level which was temporarily raised is again equalized, but the reserve is lessened. The chlorine may now leave the red blood corpuscles and again combine with the soda forming Na Cl., and thus setting free enough CO_2 to maintain its proper level. The CO_2 level is as important as the oxygen level, and if the CO_2 is decreased too greatly it may not return to its proper level, thereby causing disaster. Reserve alkalies having been washed out by the kidneys—an ordinary effort that might pass unnoticed—calls for extra stimulation by the respiratory center, and as there is not enough alkali reserve on hand it must manufacture alkali for the occasion, and so we have the dyspnoea of effort—easily produced because of lack of reserve.

The chemists have experimentally proved that a proper oxygen level must be maintained or death result, and death results even though the oxygen is brought up again to its former level. A CO_2 level also must be maintained. Upward tendencies of the CO_2 level are equalized by the respiratory apparatus. If the level descends below a safe point, it cannot be again raised even by giving CO_2, and a Haemolysis takes place and death results.

There also is an alkali level. If this falls too low, nature reproduces alkali. We should not feed alkalies when nature does not want it, even though there is a lack of alkalies. It is the level that is of utmost importance. If the alkali level is without reserve, or reserve power partially depleted, it would be of use to furnish alkalies, provided we could regulate the respiratory apparatus so as not to reproduce the results that brought on the original trouble. The loss of alkali is not the cause—it is the lack of oxygen that started the trouble.

With the above thoughts before us we return for a moment to the question of diagnosis and treatment. Every case of dyspnoea is not due to the heart, and every case of heart disease need not have constant dyspnoea. Effort can produce dyspnoea in a person whose heart is sound, but dyspnoea is one of the first and most reliable symptoms that the heart is diseased, and in a case of mild dyspnoea a diagnosis can, as a rule, be made because the physical examination can be made leisurely and the defect in the heart proved. But how about the sudden alarm at night, and you walk in on a patient sitting or propped up in bed, as a rule pale or slightly cyanotic, and covered with perspiration, breathing rapidly and labored, foam coming from the mouth, a pulse fast and sometimes irregular? This may be a first attack, and if that is the history obtained from the family, it most likely is a heart attack and should be treated as such, particularly if the attack is attributed to some excess of food or work. Compare this to ordinary asthma bronchial in type. This is generally seasonal, and while there must be a first attack, it is usually long before a physician is called. The patient usually does a great deal of the talking. He is very sick, but does not impress the physician that he is desperately ill. Between his gasps and his wheezes he tells of repeated attacks of bronchitis on exposure to weather as the cause, and after being relieved will still cough up large amounts of purulent sputum. The expiratory effort in bronchial asthma is prominent. Both inspiration and expiration are difficult in cardiac asthma and the rate faster. If the attack stops suddenly, as it may, the patient may sleep and awaken apparently cured, or he may have a severe bronchitis as a result of the exposure during the attack. This is dangerous because it is easy to neglect the heart and think that after all the patient did have a real bronchial asthma. The next attack, if treated as ordinary asthma, may result in sudden death.

The treatment of cardiac dyspnoea is first rest, and more rest. Oxygen used vigorously is valuable. Haldane and Priestly have proved that recoveries from lung edema by the use of oxygen occur where proper methods of administration are employed. Digitol, digitaline, tincture of digitalis are indicated and should be given to the physiological limit. It is advisable to be careful of adrenalin. Atropin blocks the vagus, and thus increases the difficulties in lowering the heart rate. Strychnine, camphorated oil, whisky and caffine are helpful and do not interfere with digitalis. Morphine and oxygen given together are helpful. Without oxygen, morphine is moderately dangerous, because it depresses the respiratory center which must be kept up to its work.

Some patients may die quietly and peacefully

after administration of alkalies while others die in convulsions, with or without alkalies. This method of treatment, therefore, is of questionable value. McLeod advises giving alkalies and testing the urine to determine if acidosis is present. Whitney warns against this procedure and with good judgment. He advises giving a diuretic or a physic at the same time. Too much alkali should not be given, particularly if the kidneys are defective, because the same conditions caused by surplus of acid can also be caused by too much alkali. Keeping the urine neutral is probably the best procedure. The patient should be kept in a semi-reclining position because reclining may embarrass the right heart. The lungs should be stretched by breathing exercises for a few moments several times a day. Caution is necessary to avoid overexercising, as it is possible to embarrass the right heart and right coronary artery. Epsom salts is one of the best laxatives if the kidneys are functioning properly. For a very large and full-blooded patient, venesection is sometimes a good procedure. Even though it reduces the oxygen carrying power of the blood it may relieve an overstretched vascular system.

A simple, though not absolutely reliable, test for acidosis is to give bicarbonate of soda until the urine becomes alkaline, and then watch the amount of bicarbonate necessary to keep the urine neutral. Less than four grams per day is normal and safe to use if neutral red or sulphophenolthalein is used as an indicator.

212 Stockton Street.

THE SLANDERER

The very name invokes loathing. Though more or less in human form, this degenerate remnant of the silurian age is the most contemptible of creatures. The scandalmonger is disliked, the liar is despised, but the slanderer is loathed. Using falsehoods or facts that are distorted as some would juggle statistics, the slanderer spreads a most subtle poison that blasts lives and reputations. Slander cannot be controlled any more than you can stop a lie, once it has gained credence. Compared with the social diseases, it is the greatest evil of our age. The slanderer is more dangerous and despicable than those misguided enemies of society who use bombs and poison secretly.

Whenever you discover a slanderer posing as an honorable member of our profession, let your conscience be your guide, but be sure you do your full duty.—Malsbary, editorial in the Southern California Practitioner.

Speaking of Babies—According to George Ade (Cosmopolitan, February) the old saying that "the hand that rocks the cradle rules the world" is now changed to "the hand that rocks the cradle should be amputated." There is more of humor and interesting philosophy in the article.

"The human race is, according to a guess by H. G. Wells, 75,000 years old, and only in the last twenty-five years has any one known how to welcome a baby and take care of it. All those who survived during the preceding 74,975 years were just plain lucky.

"The first impression gained by a baby of the nineteenth century must have been that Earth is inhabited by elderly people, all females except one and all wearing spectacles.

"The newly arrived of 1921 probably decides that the world is walled with white, tinctured with anesthetics and peopled by efficient internes and calm nurses."

THE PLACE OF PATHOLOGY IN THE PRACTICE OF MEDICINE*

By WALTER V. BREM, M. D., Los Angeles

If one should confine himself strictly to the subject of this paper, his task would be indeed a gratuitous one, for there is certainly no one in touch with the progress of medicine who does not recognize the practical assistance that the pathological laboratory may give to a clinician. There are, of course, some clinicians who have become discouraged in the use of laboratories by reason of incompetent service and because of the fact that ill-informed or overenthusiastic laboratory workers have advanced too often unwarranted claims that could not be fulfilled.

On the other hand, there are many clinicians who are oversanguine regarding the service that a laboratory may render, and others to whom laboratory work is like a simple test tube experiment, that he who runs may read. The former do not appreciate the limitations of the laboratory, and the latter do not understand the difficulties of the work and the necessity of its being directed by an experienced pathologist.

SCOPE OF PATHOLOGY

Pathology, in its broad sense, is the study of the causes of disease, of the structural changes (macroscopic, microscopic and chemical) underlying disturbed function, and of objective manifestations of altered structure and perverted function. Pathology is not limited, as is so often assumed, to autopsies and the microscopic examination of tissues, but the term covers the underlying conditions and objective manifestations of disease. A fairly good foundation in pathology is, therefore, a fundamental prerequisite for a clear conception of disease, and it is as essential for a clinician to be able to visualize common structural changes and to think in terms of pathology, as it is for the pathologist to have had sufficient clinical experience to hold in his view the welfare of patients.

SELECTION OF A PATHOLOGIST

Having acquired a good fundamental knowledge of pathology, so that he knows what examinations are indicated in given conditions, the busy clinician is confronted with the problem of how to secure the pathological service needed in his practice. No longer can his own office encompass the vast field, no longer can he himself find time to master the technique and perform the complicated tests indicated, and no longer can he train his own technician and supervise the work except in a very limited way. Out of this need the modern clinical laboratory has developed, with its departments of tissue pathology, bacteriology, serology, biochemistry and clinical microscopy. The laboratory is no longer limited to tests of urine for albumin, examinations of sputum for tubercle bacilli, and blood counts (relatively simple tests in the department of clinical microscopy), but its work deals with the essential

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nature of disease and its ramifications extend into every field of medicine.

It is obvious that one who specializes in "the underlying conditions and objective manifestations" of disease, of structural and functional deviations from normal, must have as a foundation a careful training in the normal phenomena of living tissue —that is, in anatomy, histology, physiology, physics, and chemistry. Then one is prepared for the study of the abnormal phenomena, tissue pathology, bacteriology, serology, clinical microscopy, and pathological chemistry; and in order to correlate this knowledge with the need of clinical medicine, the specialist in pathology should have a broad clinical perspective, an appreciation of the problems of the clinician, and last but not least, an understanding attitude toward the patient.

There is probably no other field of medical practice more exacting in its demands. In the breadth of its scope and in its importance it is second to none, and there is every reason why its dignity and integrity should be upheld by preserving for it the highest ethical standards. On the contrary, we have seen the clinical laboratory degraded and discredited, not only by the invasion of laymen and unqualified would-be pathologists, but by the support that many of the medical profession have extended to those who have attempted to exploit a noble specialty by campaigns of boastful advertising, solicitation, rate-cutting, and insidious rebating.

That members of the profession have aided and abetted the pseudo-pathologists referred to is due, I believe, to a misunderstanding of the position of pathology and of the qualifications desirable in a pathologist, and, also, to lack of realization that the insidious appeal of these persons is an attack upon the ethical standards and traditions of the medical profession and is degrading to one of the fundamental specialties of medical practice.

The problem of the clinician in securing adequate pathological service is, therefore, the old problem of selecting the qualified man, and one imbued with the ideals of the medical profession. This is comparatively easy to do. There is a reasonable excuse for members of the laity who patronize poorly qualified doctors and even charlatans and quacks, but the records of physicians are wide open to other physicians and they have the knowledge necessary for justly appraising the value of the records.

It has been said over and over again that an erroneous laboratory report is worse than none at all. Many illustrations of the truth of this statement have come to our attention, and it seems apropos to review a few concrete examples.

Tissues obtained by curettage from the uterus of two young women, one 23 and the other 28 years of age, were sent to recent graduates who claimed to be qualified in tissue pathology, that most difficult branch of all pathology. They returned a diagnosis in both instances of carcinoma of the uterus. Hysterectomy was being considered when consultation was sought by the clinicians. The sections for examination were found to be so poorly prepared that it was disgraceful to attempt to use them in making such important diagnoses; but, as far as could be determined from the architecture, there was no evidence of a malignant condition. But for the consultation, these young women might have been subjected to a major operation which would have deprived them of the possibility of having children and altered the course of their lives, and they would have been forced to labor for years under the fearful apprehension of malignant recurrences.

A third similar diagnosis in another case was made by a lay-conducted laboratory, and again the section was atrocious and there could be found in it only two or three glands, and these showed no evidence of malignancy.

Again, a laboratory conducted by laymen reported the blood picture of a patient as that of pernicious anemia, the color index being about 1.4. The prognosis was hopeless and the patient was given expectant treatment for six weeks, when a second examination of the blood with standardized instruments, made by another laboratory, showed the picture of secondary anemia with a color index of 0.7.

Notorious discrepancies in Wassermann reactions have existed so that this truly wonderful test has been at times sadly discredited. The discrepancies have been due, in our opinion, to carelessness in the titration of reagents and the use of "short-cut" systems by men not thoroughly conversant with the principles of the test. This is not a test to be experimented with and modified by technicians, but it requires always the careful consideration and supervision of a student of immunology. By only the most unceasing watchfulness and care can non-specific reactions be avoided, reactions which would fasten upon innocent persons the stigma of syphilis, cause them to suffer the mental anguish of the spirochetæ infected, and subject them to a drastic, expensive and unnecessary treatment. A good number of such cases have come under our observation. The visualization of such an eventuality by those possessing a "clinical conscience" is, I believe, the only thing that will keep strictly up to standard the complicated titrations and other technical procedures of the Wassermann test.

The opportunities for errors in laboratory work are unlimited, and one must be on guard continually to avoid them; he must realize that man, including himself, is exceedingly fallible, and he must be not only willing but eager to repeat and recheck tests again and again when any doubt exists. He must be, indeed, his own most severe critic.

LIMITATIONS AND USEFULNESS OF PATHOLOGY IN MEDICAL PRACTICE

One of the difficulties with which the clinical laboratory has met is that frequently too much is expected of it—that is, that the limitations of various examinations are not fully understood. There are but few laboratory tests which are pathognomonic, and laboratory results should be considered only as evidence in a case, evidence to be weighed in the balance with all the other evidence which only the attending physician pos-

sesses. Such results should be classified and weighed, therefore, with certain symptoms and physical signs which may or may not be the deciding factors in the diagnosis, prognosis or indication for treatment.

It seems scarcely necessary to review in detail the many avenues through which pathology can be useful to the clinician. It does, however, seem advisable to discuss certain services that may be rendered.

In the domain of tissue pathology, necropsies and surgical pathology should be emphasized. There is no stimulus so powerful and no teaching so instructive as the post-mortem examination. Feared by the careless and cock-sure, and sought for by the earnest and humble student, it stimulates thoroughness, enthusiasm and humility as nothing else can do. Indeed, the scientific spirit of the medical profession and of hospitals can be measured with a fair degree of accuracy by the interest taken in securing post-mortem examinations. No hospital is complete without adequate facilities for these extremely important investigations.

It is a popular fallacy that doctors desire post-mortem examinations because of a morbid curiosity. Of course, nothing could be further from the truth, and it is the public who are benefited most, both through the more careful and enthusiastic clinical work stimulated by the examinations, and through the additional knowledge gained. Therefore, it is a matter of vital interest to the public that permission to hold autopsies be given and adequate facilities provided.

The necessity of pathological examinations, by frozen sections at operations or otherwise, of surgical specimens scarcely needs emphasis. But it should be emphasized again that cellular pathology is the most difficult of all laboratory examinations, and that the cellular pathologist requires longer years of experience and study than any other laboratory worker. Even the best trained pathologist is forced to say not infrequently that he is unable to venture an opinion regarding the malignancy of a specimen. He should know always the anatomical source of the tissue and the essential points in the history of the case, for he needs frequently every aid that he can receive in arriving at an opinion.

In bacteriology, vaccines have had their day of the usual exploitation of new therapeutic methods, and out of the confusion have come a few valuable additions to our armamentarium. Among these are prophylactic typhoid and probably yellow fever vaccination and vaccines for staphylococcic infections. Of course, the tremendous value of the old-established vaccines against smallpox and rabies is undisputed, except by doctrinaires and cultists. Some of the other vaccines occasionally appear to produce beneficial effects, but most of them have been disappointing. Of the anti-bacterial serums, three are pre-eminent—the anti-diphtheritic, the anti-tetanus, and the anti-meningitis. The anti-plague, anti-cholera, anti-anthrax and anti-yellow fever serums are said to be of value. Animal inoculations, blood cultures and other cultural examinations of exudates, such as diphtheritic, are of course, of great importance in certain cases.

In the field of serology, the typhoid agglutination test and the Wassermann test stand out above all others in practical value. The agglutination test should be made with a standardized suspension of typhoid organisms (like the Dreyer antigen) or with a suspension of organisms grown at room temperature, which we have found to have practically the same agglutinability as the Dreyer antigen. The incubator-grown bacilli are much more resistant to typhoid agglutinins.

The value of the Wassermann test has been greatly enhanced by the cholesterinized antigen and the ice-box preliminary treatment. The cholesterinized antigen, however, as first introduced (0.4 per cent cholesterine) caused a considerable number of non-specific fixations, and brought about much criticism of the Wassermann test. Very soon after its introduction, our titrations showed that cholesterine in 0.1 per cent did not give the non-specific fixations and that it gave a far more sensitive test than the old antigens. Its sensitiveness has been greatly increased by the ice-box preliminary treatment instead of the water bath incubation at 37° C. We believe that the test made according to this technique is as sensitive as it can be made without danger of the calmity of non-specific fixation.

The new biochemical tests, for several years, have enjoyed a vogue that we have felt has been out of proportion to their clinical value. Some of the chemical tests are, at times, no doubt helpful, especially the study of blood sugar, urea, creatinine, and the phenolsulphonepthalein test. But none of them have supplanted the old and tried clinical and urinary criteria, upon which the careful clinician still lays the greatest stress. The basal metabolism test may be included here, as it deals with the chemistry of respiration. It seems to be a real contribution to our armamentarium in differentiating the cases on the clinical border line of hyperthyroidism, and in indicating the degree of thyroid intoxication.

Clinical microscopy, to which, with tissue pathology, the laboratory was limited not so very long ago, now occupies a less conspicuous though still important place. Urinalyses, sputum examinations for tubercle bacilli, microscopic examination of feces, and blood counts are as imperative in given cases as they ever were. But many of the blood examinations, even those reported in the literature, are of no value because the instruments used were not standardized. Especially is it important to use reliable hemocytometers and hemoglobinometers. The Levy hemocytometer may now be obtained under the stamp of standardization of the Government Bureau of Standards. Every new hemoglobinometer should be standardized when first obtained, and some of them at intervals afterward. Failure to do this is frequently revealed in the literature in case reports of conditions other than pernicious anemia in which the color indices run sometimes far above 1.

Many of the examinations in a clinical laboratory depend for their value upon vigilance in such small details of technique: The correct and repeated titration of reagents, the preparation and renewal

of stains such as the analine gentian violet of Gram's stain and the eosin-methylene blue blood stains, the method of getting specimens, the condition of specimens, the selection of a test when more than one is described, etc. Valuable additions have been made in recent years to the department of clinical microscopy in the dark field examination for spirochetes and in the blood group tests preparatory to transfusions.

The departments discussed are distinctly features of the clinical laboratory, but there has developed another phase of work that merits discussion. Because of its equipment, personnel, and experience in intravenous work, many clinicians have found the laboratory to be of assistance to them in certain other diagnostic and therapeutic procedures such as lumbar punctures, tuberculin tests, blood transfusions, intravenous glucose injections, and anti-rabic treatments.

RESEARCH IN CLINICAL LABORATORIES

In addition to the above outline of work, we feel that every clinical laboratory should be interested in one or more large subjects of investigation. Research, far better than anything else, will preserve and foster a scientific spirit and will inject life into a laboratory. In trying to follow out this idea, our laboratory has been interested since 1912 in the treatment of syphilis with the arsenicals, especially of neuro-syphilis. This investigation over a period of ten years not only has contributed a large and unusual series of cases carefully controlled by blood and spinal fluid tests, but it has aided us materially in developing these tests to furnish special information that the clinician needs. Another investigation that our laboratory has conducted over a period of ten years is that of blood transfusions controlled by blood grouping as worked out by Moss. At first defibrinated blood was used, then citrated blood, and, since 1916, whole blood by the Lindemann syringe method. Our series of transfusions now numbers about 2000, and has taught us some valuable lessons which will be embodied soon in a report. Many minor investigations besides have been carried on—the agglutination of the typhoid group by the serums of over 100 nurses after vaccination with the triple vaccine, the agglutination and complement fixation curves of normal rabbits after typhoid vaccination, the technique of the Wassermann test with especial reference to cholesterinized antigens, etc. These researches have been of inestimable value, not only in stimulating interest and relieving the routine of laboratory work, but also in inculcating the scientific spirit in the technicians and developing in them an active desire to avoid errors.

ORGANIZATION AND PERSONNEL OF THE PATHOLOGICAL LABORATORY

The staff of a laboratory should be large enough to take care of each piece of work that comes to it at the "peak load" as well as if it were the only work to be done, and this regardless of the overhead cost. Laboratory work takes time and care; it cannot be unduly hurried, and the scientific spirit is brutally injured when one attempts to "get by" with work not well done and well controlled. This ideal requires not only a large staff, but one carefully picked and trained. A laboratory should not accept the training or take the spirit for granted of any technician without a period of probation and careful supervision, no matter where the training has been conducted or how glowing the recommendations. This policy has saved us from many experiences that would have been fraught with distressing errors. An efficient large clinical laboratory must be built up slowly, its efficiency and spirit must be the result of a healthy growth, and beneath all its work should be a supporting tradition of service. These things cannot spring into being with a mushroom growth over night, but, like the great clinical offices, they must begin with the physician in a small way, and gradually grow into their own. It seems to me that this conception gives the clinical laboratory its rightful place among the great dignified specialties of medicine, and I plead for the fine ethical ideals of the medical profession to be applied to the clinical laboratory, to keep it dignified, to save it from commercialism, and to preserve its scientific spirit. In this way only will the place of pathology be an honorable one, in this way only will scientific and high-minded physicians be stimulated to follow this work, and in this way only will pathology be able to give of its best to the practice of medicine and find its place among its sister specialties.

American Red Cross (Abstract from the Report of the Board of Trustees, American Medical Association, Minutes, House of Delegates)—At our annual meeting in November, 1921, the secretary of the board reported the result of a conference with the vice-chairman of the Central Committee of the American Red Cross, in regard to the present and proposed future activities of that organization in public health work. He also presented a copy of a letter written by him to the vice-chairman of the Central Committee of the American Red Cross, in which the opinion was expressed that the time had arrived when the American Red Cross should cease its public health activities and should restrict its work to the relief of disabled ex-service men in the hospitals and in their homes, in addition to the purposes for which it was originally organized, as designated in its charter. The board approved the action of the secretary and endorsed the opinions expressed by him in the letter referred to. Apparently, the Central Committee of the American Red Cross has not modified its public health program. It is the opinion of the board that the association, through the House of Delegates, should take appropriate action to convince those in authority that the public health activities of the American Red Cross are no longer necessary and if continued are likely to promote community irresponsibility and helplessness in regard to its own welfare.—Journal A. M. A., May 27, 1922.

EDITORIALS

THE FIFTY-FIRST ANNUAL MEETING OF THE MEDICAL SOCIETY OF THE STATE OF CALIFORNIA

The 1922 meeting of the Medical Society of the State of California, held in Yosemite Valley, May 15 to 18, was a success. This from whatever angle one cares to review it.

Socially, the spirit of good-fellowship, companionship and cordiality was splendid as between members, their families and guests. The hospitality and spirit of co-operation of the officers and staffs of the Government, the hotels and transportation companies, deserved and secured much praise. Many persons visiting the Yosemite Valley for the first time were converted into future friends and patrons of its beauty and hospitality.

In spite of the truly wonderful and varied outdoor attractions that invited one on every side, the attendance at all meetings was gratifying and the program was carried out with but minor changes. The program covered an exceedingly wide range of subjects, including public health, clinical medicine, pathology, research, and medical economics.

Over two hundred papers were read. These manuscripts aggregate over 4000 pages of typewritten matter, or, with the discussions, nearly two million words. Printed in ordinary type this would represent about two volumes the size of Osler's text book on medicine.

The most important feature of these statistics, to our members and to the Editor of the Journal, is that it would take over two years to publish all of these papers in the Journal even if every one of the reading pages in every issue were to be utilized exclusively for the purpose.

It is obvious that the Editorial Staff of the Journal has an arduous task in examining all of these manuscripts, as well as the unpleasant and difficult task of selecting from so many good papers the ones that it is possible to use in the Journal before the next meeting of the Society.

The papers presented, both in the General Sessions and in the fourteen Sections, were unusually good; and consequently, the scientific interest and "atmosphere" was kept upon a high plane throughout the meeting.

The important matters acted upon by the Council and House of Delegates will be considered in the July issue of the Journal.

PATENT MEDICINE FRAUDS INCREASING

The advertising columns of some newspapers are beginning to look like they did before Samuel Hopkins Adams' "Great American Fraud Articles" and before the clean advertising organizations began to be effective.

Taking advantage of the general instability of the social and economic conditions, many of the old frauds that have not been in evidence for many years, as well as many new ones, are taking large space and are making the usual fraudulent claims. The testimonial writer is with us again and many others of the oldtime methods once thought to be destroyed are out again in full force.

The following advertisements illustrate this point:

"Hurry Mother! Even a sick child loves the 'fruity' taste of California 'Fig Syrup.'" Many people have forgotten that "Syrup of Figs" contained 6 per cent of alcohol and that its active principle is not figs but senna, a cheap and well-known drug.

"Pape's Cold Compound" was exposed in nostrums and quackery more than ten years ago, when its analysis showed it to contain: Acetanilid, 1.6 grains (a cheap, powerful and dangerous coal-tar heart depressant); phenolphthalein, 1.8 grains (a well known and cheap laxative); sugar, 8 grains.

Many cheap cocktails of other days that have been exposed and all but forgotten are again advertising. The alcohol content that formerly was printed in exceedingly small type is now carried in a way to be easily read.

THOMAS CLAY EDWARDS

In his presidential address, John H. Graves, among other serious and important messages to the physicians and citizens of California, called particular attention to the duties, responsibilities and importance of the work of the general practitioner.

The same theme ran like a golden thread through the discussions and atmosphere of the Fifty-first Annual Convention of the State Medical Society to such an extent that one distinguished member suggested an editorial on the rediscovery of the family physician.

This happy spirit fittingly prepared the way for the unanimous election of Thomas Clay Edwards as President-elect of the State Society.

Doctor Edwards is from Monterey County, and has been engaged in general practice in the small city of Salinas for nearly forty years.

Health Insurance—Group Medicine (Minutes, House of Delegates, A. M. A., address of Speaker) —Compulsory health insurance never will and never can become an American institution. As our campaign of public education broadens, this fantastic, un-American machination and the fancies of its proponents will fail to arrest legislative attention and consideration or draw unto it public demand and support. There are other forms of medical practice, instigated, conducted and extended by individuals, groups and health and lay agencies that encroach on and mitigate against the interests of the individual doctor. Some of them merit endorsement and support. Others, however, require our emphatic and perhaps drastic denouncement. They are dependent, for success and extension, on the members of our profession. Regretfully we recognize that many physicians, thoughtful only of self, place their services at the command of such agencies. Such practices must not be condoned.—Journal A. M. A., May 27, 1922.

COUNTY SOCIETIES

ALAMEDA COUNTY

Alameda County Medical Association (reported by C. L. McVey, secretary-treasurer)—The general meeting of the Alameda County Medical Association was held on April 17, 1922, at the Public Health Center.

George Rothganger presented a case of infantile paralysis in a boy who has been operated on for correction of the deformity in the lower extremities, resulting from a former infection.

A. A. Alexander read a paper on "Some Common Heart Arrhythmias." Recent development of interest in arrhythmia has led to elaborate instrumental investigation. Basing our efforts upon the material so provided we may diagnose many arrhythmias by simple bedside investigation. Alexander emphasized the importance of recognition of beginnings of diseased state as an aid to restoration; of the anatomy and physiology; of mechanism, etiology and recognition of (1) tachycardia; (2) heart block; (3) auricular flutter; (4) auricular fibrillation.

Mr. P. L. Ansell discussed "The Value of Teleroentgenograms in diseases of the cardio-vascular system. (1) limitation of the fluroscopic method of examination; (2) comparison of the Groedel Bardeen and Friedlander methods of heart measurements and the types of cases in which teleroentgenographic measures are of greatest value as an aid to diagnosis; (3) the value of combining two of the above methods, based on a series of cases in institutional work and private patients.

The Secretary read resolutions of condolence in the case of the death of Joseph Medros. The committee appointed to draw up the resolutions were Maher, U. C. Billingsly and James Hanley.

About twenty-one members of the Merritt Hospital staff made a trip to Fresno on May 2. A banquet was given to the visiting physicians by the staff of the Burnett hospital. The meeting of the Fresno County Medical Association was turned over to the visitors. Hubert Rowell read a paper on "Some Neglected Landmarks in Therapeutics." S. H. Buteau followed with a paper on "The Surgical Abdomen." Siefert read a paper on "X-ray Therapy." M. L. Emerson read a paper on the use of "Novocaine in Spinal Anesthesia."

CONTRA COSTA COUNTY

Cottage Hospital, Richmond, California—This hospital, under the management of Miss Agnes Driscoll, has recently been equipped with an electric sterilizing outfit.

VENTURA COUNTY

Big Sisters Hosital, Ventura—What was formerly known as the Bard Memorial Hospital is now known as the Big Sisters Hospital. It has a board of directors representing the Big Sisters organization, and its staff includes practically all of the members of the Ventura County Medical Society. Miss Mary Ferdinand, an experienced nurse, is superintendent of the hospital.

FRESNO COUNTY

Selma Sanitarium, Selma—This new hospital is nearing completion. The building consists of a half basement and first and second floors, with the usual space for general utility departments and office administration.

KERN COUNTY

Wasco Sanitarium—E. S. Fogg is erecting a small sanitarium near his office in Wasco, Kern County. The sanitarium will consist of five rooms and is connected with Dr. Fogg's office.

LOS ANGELES COUNTY

The Los Angeles Radium and Oncologic Institute Opens Clinic For Those Unable to Pay—With the installation of the new deep X-ray therapy equipment and otherwise increasing the personnel and facilities of the Institute, the directors feel that it is desirable to establish a definite clinic for the study and treatment of appropriate indigent patients. There has been set aside approximately one-fourth of the facilities of the Radium, X-ray and Clinical laboratories to be devoted to this work. The clinic will be limited to ambulatory cases and will be conducted on Wednesday and Saturday mornings, from 9 to 10 o'clock. Members of the medical profession are cordially invited to visit the clinic that they may better familiarize themselves with the development of radiology and the diagnosis and treatment of neoplastic diseases and other appropriate conditions (Bulletin, Los Angeles County Medical Association, February 16, 1922).

Hollywood Community Hospital—This organization now owns its own lot and has $245,000. They are going ahead with their plans to build in proportion to the total amount of money received by the selling of preferred stock with a guaranteed interest of 7 per cent and now earning common stock. Shareholders in both classes of stock have a say in the management of the institution. It is proposed that this hospital make the usual charges for service to those who are able to pay; those who cannot pay full rates shall pay as much as they can afford, even though this may be nothing at all. The balance in volume between full pay, part pay and absolutely free work will be maintained in accordance with the condition of the hospital's finances, it not being essentially a money-making proposition.

Long Beach Municipal Hospital—A movement is under way by the city of Long Beach to convert its present city hall into a municipal emergency hospital when the new city hall, now under construction, is completed.

Hermosa Beach—The Hermosa Beach and Redondo Beach Chambers of Commerce have endorsed the proposition of Carl Anderson, M. D., to open a sanitarium. Local physicians of Hermosa Beach have endorsed Dr. Anderson's plan for a general hospital.

Casa Del Mar Hospital, Venice—This hospital consists of twenty modern bungalows that will take care of three patients each, with a central general utility service arranged somewhat like the bungalow hotels of Southern California. The hospital is located on Venice boulevard, easily accessible to all parts of the Santa Monica bay district.

El Segundo Hospital—Mrs. Gregory has opened a five-bed hospital at El Segundo, California. The staff of the hospital consists of Doctors Harry H. Davis and C. M. Anderson of Hermosa Beach.

Good Samaritan Hospital, Los Angeles—This hospital has recently been accredited by the Council on Medical Education and Hospitals of the A. M. A. This is gratifying news to all medical men in the southern part of the State, and the Board of Trustees, officers and staff of that hospital are to be congratulated upon the splendid improvement they have made in the hospital during the last few years.

Children's Hospital, Los Angeles—The outpatient department of this splendid hospital is growing very rapidly. Last year the combined clinics handled 6,674 patients.

Los Angeles Orthopedic Hospital and School—This new hospital, costing $150,000, was dedicated and opened to the public on April 17, 1922. The hospital and school will be operated by the Los Angeles Orthopedic Foundation. The beautiful

property on which the hospital is located was given by Mr. John Brockman, and Mrs. Anita Baldwin contributed $50,000 of the cost of the building and equipment. Twelve thousand people have contributed small amounts, and more than four hundred of them were present at the opening exercises. Dr. C. L. Lowman is director of the institution.

MERCED COUNTY

New Method of Selecting Physician—The Merced Board of Irrigation has passed a resolution to ask physicians to submit their names for a one-dollar-a-month contract practice among the employes of the district, and to care for sicknesses that may arise in their various camps. The method of selecting is, to put the names of the various physicians (if any should so lower their standing as to apply) in a hat and shake it. Then a name will be drawn from the hat, and the physician whose name is drawn will be declared the official physician of the Merced Board of Irrigation. This is a particularly disgusting reflection upon the medical profession and, as one of our reporters from Merced County states, "It has all the earmarks of shaking dice for cigars."

RIVERSIDE COUNTY

Riverside County Medical Society (reported by T. A. Card, secretary)—The County Medical Society met at the Mission Inn on April 10, 1922, with 35 members and 25 visitors present and 12 members absent. The occasion of the meeting was a complimentary dinner to President Ray Lyman Wilbur of Stanford University, given by the Board of Directors of the Riverside Community Hospital.

President Wilbur's subject at the meeting was "The Community Function of the Hospital." Dr. Wilbur stated that "the hospital is primarily the training center for health in a community. It is a real community enterprise, even though conducted on an independent basis by private individuals. The application of aseptic surgery, the contributions of the laboratory sciences to medical practice, the X-ray, etc., have all demanded a center in which they may operate to the economical service advantage of all the people. Such a hospital is also the radiating point for medical information. It is here that the physician, the student, the nurse, the patient and the public all come together with a common purpose. Community welfare depends upon the physician more than upon the politician."

Dr. E. N. Wood, superintendent of the County Hospital, has been granted leave of absence for one year, and A. W. Jones will occupy the office of superintendent during this period.

Hemet Hospital—J. A. Ramsay, M. D., has assumed control of Hillcrest Sanitarium at Hemet, relieving Dr. Gregory, who formerly had charge of the institution.

SANTA CLARA COUNTY

Santa Clara County Medical Society (reported by E. P. Cook, secretary)—The Santa Clara County Medical Society, the County Dental Society and the Bar Association of Santa Clara County held a joint meeting on April 19 in the banquet hall of the Commercial Club at San Jose. Samuel G. Tomkins, president of the new San Jose Hospital board of directors, presided. Short talks were given by George B. Little, president of the County Dental Association; Raymond C. Wayland, president of the County Medical Society; Hon. John E. Richards, Judge of the Appellate Court of California, and James B. Bullitt.

[Editor's Note—The Santa Clara County Medical Society is to be congraulated upon its activities and particularly upon initiating this form of meeting between members of three great professions.]

SAN BERNARDINO COUNTY

San Bernardino County Medical Society (reported by E. J. Eytinge, secretary)—The society met at the County Hospital, San Bernardino, with thirty members, twenty dentists and ten guests present, and forty members absent.

George W. Clark and J. S. Reekie were elected to membership. Charles P. Engel transferred from Calexico.

Goodman A. Miller, D. D. S., presented a paper on "Radiographic History of a Case of Osteomyelitis of Entire Mandible."

William B. Bowman of Los Angeles discussed "Fractured Vertebrae," and Ellis Jones of Los Angeles discussed the "Treatment of Club Feet."

This was an interesting combination meeting of the Medical and Dental Societies and scientific problems of common interest were discussed by both organizations.

Health and Medical Work in San Bernardino County—San Bernardino County has adopted the best method possible as a nucleus upon which a program of public health and medical improvement can be based. They have combined the positions of county health officer, county physician and superintendent of the county hospital into one position and have employed upon a strictly full-time basis a physician, Dr. Lenker, to fill these three positions.

They have furthermore placed upon salary an assistant to Dr. Lenker upon full time, Dr. Vickers.

SAN DIEGO COUNTY

San Diego County Medical Society (reported by Robert Pollock)—The physicians of San Diego are considering an opportunity to enjoy their own building with the space devoted entirely to offices of physicians and dentists and tenants acceptable to them. Ground will be broken within a month for a six-story building facing on Fifth, Sixth and B streets, to contain a theater entrance and store rooms on the ground floor, and offices on the floors above. The owners are willing to make of it a physicians' building and name it such, provided 80 per cent of the floor space will be contracted for. The location is an ideal one, situated in the heart of the shopping district. The owners, as we understand, are willing also to provide free of rental a library room and auditorium for the medical and dental societies. It reflects the fact that the members of these professions make good and permanent tenants.

The San Diego Society is sending a good delegation to the Yosemite meeting of the State Society.

The last meeting of the County Medical Society was held in the auditorium at St. Joseph's Hospital on Tuesday, April 25, and discussed as the paper of the evening the treatment of asthma in all its bearings. The essayist was R. A. Kocher.

The newly installed staff of the San Diego County General Hospital consists of the following: Samuel Stallard, University of Virginia; E. O. Rowley, University of New Zealand; Gladys Rowley, University of New Zealand; Gwendolyn Stewart, College of Medical Evangelista, Loma Linda and Los Angeles.

In the passing of Dr. E. M. Fly, the San Diego profession and the county society lost a much valued member; one whose counsels were ever soght and prized in times of public crises when the well-trained and experienced medical man alone could guide and guard the public health. The Bulletin hopes in the near future to present a brief biography of our lamented brother. Meanwhile the Bulletin anticipates the action of the society in properly recording in its own transactions the sense of the loss it has sustained.—R. P. (Bulletin of the San Diego County Medical Society.)

SAN FRANCISCO COUNTY

San Francisco County Medical Society—At the meeting of April 18, E. B. Towne read a paper on the value of cerebral pneumograms in the localization of intracranial lesions. He reviewed Dandy's work, and presented five illustrative case reports.

In three cases of obstructive hydrocephalus from 500 to 1500 cc. of ventricular fluid were replaced by air. Roentgenograms of the infants' heads showed the disease to be due to occlusion of (1) the foramina of Magendie and Luschka, (2) the aqueduct of Sylvius, and (3) the right foramen of Monro. New foramina were made for the first two patients, but, though the operations were well borne, the hydrocephalus was not cured, and both died in a few weeks. The third patient died of shock following extirpation of the choroid plexus. In these three cases the disease was far advanced; Dandy has shown that before the ventricles are greatly dilated the points of obstruction can be attacked with a fair chance of success.

The two brain tumor cases were more important. The first patient had increased intracranial pressure and major epilepsy, without localizing signs. The pneumogram showed that no air passed into the left lateral ventricle. At operation a large gliomatous cyst in the left temporal lobe was evacuated. Six months later the patient was working and considered herself perfectly well. In the second case major epilepsy began in the thirty-second year, without increased intracranial pressure or localizing signs. Roentgenograms disclosed a calcified tumor in the right frontal lobe. Pneumograms were done to try to demonstrate whether the tumor was attached to the meninges at the base or lateral wall; but they gave no help, for no air passed into the right lateral ventricle. At operation a calcified glioma was partially removed. Three months later the patient was having occasional epileptic attacks. Had the tumor not been calcified it could have been diagnosed only by the pneumogram. Such patients are probably not infrequently treated as cases of idiopathic epilepsy.

The conclusions were that cerebral pneumography was devoid of harmful effects in these five cases; that it was valuable in detecting the point of occlusion in obstructive hydrocephalus; and that it was the essential diagnostic method in the localization of tumors lying in silent areas of the brain.

City Board of Health Budget—The City Board of Health budget for the coming fiscal year has been submitted and totals $4,000,000. This budget includes $15,000 for radium, $11,000 for a building to house women discharged from State institutions, $1,500,000 for new buildings at the Relief Home, and $500,000 for a new Board of Health building.

University of California Student Hospital—The present "Infirmary," located on the campus of the University at Berkeley, has been declared inadequate, and plans are under way to construct a new hospital of 100 beds, to be used by faculties and students of the university. Robert T. Legge, M. D., is director of this hospital.

St. Luke's Hospital—St. Luke's Hospital, San Francisco, announces that it is now equipped with a modern deep therapy X-ray apparatus which has ability to produce a voltage of 280,000 volts.

Dr. Alfred C. Reed has resigned as medical director of the Ross Sanitarium.

SOLANO COUNTY

Benicia Arsenal Hospital—Money has been appropriated and plans and specifications are being prepared for the construction of a hospital in Benicia Arsenal.

SAN JOAQUIN COUNTY

San Joaquin County Medical Society (reported by Dewey R. Powell, secretary)—The regular meeting of the San Joaquin County Medical Society was held at the State Hospital Friday evening, April 14. In the absence of the president, Margaret Smythe, second vice-president, presided. Those present were: Margaret Smythe, L. Dozier, Grace McCoskey, F. J. Conzelman, E. L. Blackmun, H. C. Price, H. E. Sanderson, J. W. Barnes, W. Friedberger, E. L. Tretheway, J. E. Nels, E. A. Arthur, A. H. McLeish, N. E. Williamson, C. D. Holliger, J. P. Hull, H. Smythe, D. R. Powell, with W. H. Kellogg and E. C. Dickson of San Francisco as guests.

The first paper was given by E. C. Dickson on the subject of "Botulism." He spoke of the recent interest through the outbreak three years ago in the east which was due to California ripe olives and resulted in widespread newspaper publicity which crippled the olive business for a period of two years. As a matter of fact botulism was well described in 1735 and in 1802 was the subject of public health reports in German cities.

The bacillus botulinus is a spore bearer and an anaerobe and withstands 245 degrees heat for 35 minutes. Furthermore its toxin is not destroyed by gastric juices. The bacteria do not produce toxin in the body but it develops in preserved food before eating. He showed the small proportion of infected cans in 1917, 1918 and 1920 by stating that out of 91,912,000 cans of olives fourteen cans only were known to have been infected. Since 1889 not over 200 jars of all kinds of preserved food have been known to have been infected and in 1917 alone 850,000,000 home-canned containers for home-canned materials were sold. Preventive measures have been established by care on the part of the commercial canner under Government regulations together with the education of the individual housewife through public channels. During the discussion Dickson answered many questions and spoke of some of the symptoms. In the first twenty-four hours there is general malaise, double vision, dizziness. In thirty hours ptosis, dilated pupil, paralysis in talking and swallowing, muscle weakness, no pain, no sensory disturbances, death from respiratory failure and the mortality is from 60 per cent to 100 per cent. Clinically the use of antitoxin has been disappointing because not given early enough.

The next speaker was W. H. Kellogg, who spoke on the control of diphtheria. He mentioned the decrease in the mortality rate from 64 per cent to around 8 or 10 per cent with use of antitoxin, but that there are still about 200,000 cases per year with some 20,000 deaths. The main method of spreading the disease is by the healthy carrier or by the case in which the diagnosis has been missed. Most of the deaths are due to the delay in calling help, and Kellogg emphasized the necessity of giving antitoxin early without waiting for a laboratory report in suspicious cases and of giving adequate initial doses, wherever possible, intravenously. In the control of diphtheria the matter of educating the public to be suspicious of sore throats and care for them early was emphasized as well as establishing immunity by toxin antitoxin method. Over 100,000 such cases have been treated in New York City with no bad results. This test is of great importance to children as the older one gets the more immunity is established. Kellogg also mentioned a test he is using. This consists in injecting the blood of a guinea pig which in cases of a susceptible patient gives a very quick reaction in a few hours; quicker results than the Schick test. Numerous questions were answered and the chairman thanked both physicians for their courtesy in appearing before the society.

Second meeting of Medical Society (reported by D. R. Powell, secretary)—The meeting of May 12 of the San Joaquin County Medical Society was held at the State Hospital. Those present were: R. T. McGurk, J. D. Dameron, A. H. McLeish, F. P. Clark, H. Smythe, Minerva Goodman, F. J. Conzelman, H. E. Sanderson, Grace McCoskey, Margaret Smythe, N. E. Williamson, L. Dozier, H. S. Chapman, C. F. English, D. R. Powell, and Kaplan of Stockton, with Richard W. Harvey and Julian M. Wolfsohn of San Francisco as guests.

The following resolution was unanimously adopted:

Whereas, the State hospitals for the insane and the Sonoma State Home for Feeble-minded comprise the medical division of the State's service; and

Whereas, we feel that the care and supervision of these institutions should be under the direction of a medical man; and

Whereas, Dr. John A. Reily, former Medical Superintendent of the Patton State Hospital, has been appointed to the position of Director of State Institutions; and

Whereas, on account of Dr. Reily's long and efficient service in the care and management of the insane, we are confident that the departments of the State's service under his jurisdiction will be conducted in an efficient and economical manner; be it

Resolved, that the San Joaquin County Medical Society at this meeting on May 12 commend Hon. William D. Stephens, Governor of the State of California, for appointing Dr. Reily; and be it further

Resolved, that a copy of this resolution be forwarded to Governor Stephens.

The delegate to the California State Medical Society meeting in Yosemite Valley was instructed to introduce such resolution at the State meeting.

A motion was adopted instructing the secretary to write to the District Attorney and Assistant District Attorney, expressing the approval of the society over the diligent action of the officials in prosecuting individuals who are practicing medicine without a license.

Dr. Richard W. Harvey of San Francisco read a paper on "Combined System Disease." Harvey discussed very thoroughly the etiology, symptoms, differential diagnosis and pathological findings.

Julian M. Wolfsohn spoke on the "Clinical and Pathological Aspects of Lethargic Encephalitis." The author particularly emphasized the fact that lethargic encephalitis was an infection of the central nervous system of unknown origin and that the prognosis must be extremely guarded. Cure is not certain and relapses occur very easily and frequently and the only treatment is rest in bed over a minimum period of two months followed by another period of no work for six or eight months.

SANTA BARBARA COUNTY

Santa Barbara County Medical Society (reported by A. C. Soper, Jr., Secretary)—The County Society held two meetings in April; one on the 10th with fifteen members and one visitor present and thirty-nine members absent; the other on the 24th with twenty-six members and three visitors present and twenty-eight members absent.

Albert Quincy Spaulding of Santa Barbara was elected to membership. Application of Jesse P. Truax of Lompoc was referred to the censors.

The society passed a unanimous resolution recommending that the City Council pass a resolution insuring a sane and safe Fourth of July.

H. O. Koefod read a paper on "Perforating Aneurysm of the Abdominal Aorta."

G. F. Farman, paper, presented by H. J. Profant, was on "The First 100 Cases Examined at the Santa Barbara Boys' Clinic."

The society invited Dr. Geiger of the U. S. Public Health Service to give a public lecture in Santa Barbara on "Botulism."

At the meeting on April 24, R. M. Clarke presented a paper on "Treatment of Constipation." This paper elicited considerable discussion by many members.

H. J. Profant read a paper on "Suppurative Parotitis," which consisted of a critical review of literature.

Santa Maria Valley Hospital Association—This group association has been authorized to sell stock and to proceed with the construction of the Santa Maria Hospital. Lucas, Thorner, and Coblentz are the prime movers in this laudable ambition to secure a good hospital for Santa Maria.

Cottage Hospital, Santa Barbara—This hospital has now completed the installation of a modern deep therapy X-ray department. The apparatus is capable of developing 280,000 volts, of which 200,000 volts are available.

YOLO COUNTY

Yolo County Medical Society (reported by Lela J. Beebe, secretary)—This report covers the meettings and activities of the society for March, April and May.

The society met on March 14 at the County Court House, Woodland. Those present were Bates, Beebe, F. R. Fairchild, Lawhead, Lawson, Goffin and Newton. Absent: Bransford, Craig, Desrosier, C. H. Fairchild, King, McManus, Parsons, Poage, Pulsifer and Ward.

Crawford of Sacramento read a paper on "Some Orthopedic Defects of Common Occurrence."

J. D. Lawson of Woodland and Keith of Williams were elected to membership.

Goffin, Blevins and Lawhead were elected to the Board of Censors.

Lawhead was appointed delegate to the State meeting in May.

W. E. Bates and H. D. Lawhead presented reports of their observations while attending the recent Medical Clinics at Rochester, Minn.

The Woodland Sanitarium has now available 65 mg. radium, which will be put to use at once.

The Woodland Sanitarium reports that, since its weekly Health Conferences for children were opened in February, 1921, 342 children under six and 92 children of school age have been given a physical examination here with recommendations regarding hygiene and correction of defects. Frequent return of these children for observation have brought the total of visits during this time up to 1100.

SONOMA COUNTY

Sonoma County Medical Society (reported by N. Juell, Secretary)—The monthly meeting of the Sonoma County Medical Society was held on April 22 with nine members and two visitors present and twenty-nine members absent.

A number of interesting case reports were discussed at the meeting.

TULARE COUNTY

Tulare County Medical Society (reported by Elmo R. Zumwalt, secretary)—Tulare County Medical Society met on Sunday, April 23, 1922, at Hotel Johnson, Visalia. Following dinner the meeting was called to order by President A. W. Preston. There were twenty-two members present.

Following a few business items the speaker of the evening Miley Wesson of San Francisco gave a most interesting talk on the embryology of the bladder in its relation to present day diseases with especial reference to prostatic hypertrophy. The talk was enhanced by a series of excellent lantern slides.

C. A. Tillotson, M. D., of Dinuba, announced his candidacy at the coming primaries as a candidate for the State Assembly. Dr. Tillotson is a man who will fill such a position most capably and should receive the hearty support of the whole district.

Pharmacy and Chemistry

Edited by FELIX LENGFELD, Ph. D.

Help the propaganda for reform by prescribing official preparations. The committees of the U. S. P. and N. F. are chosen from the very best therapeutists, pharmacologists, pharmacognosists and pharmacists. The formulae are carefully worked out and the products tested in scientifically equipped laboratories under the very best conditions. Is it not plausible to assume that these preparations are, at least, as good as those evolved with far inferior facilities by the mercenary nostrum maker who claims all the law will allow?

Quinidin in Heart Disease—Quinidin has suddenly leaped into prominence because of its striking effects in certain forms of cardiac irregularity. To see a heart that has been constantly irregular for one or two years because of a fibrillating auricle lose its lawless and rapid beat within a few hours under the influence of this drug and resume normal rhythm and rate and maintain these for months, must attract the attention of all. The conclusions of the few clinicians who have thus far reported their investigations are in remarkable agreement as to the fact that in about half of the cases of auricular fibrillation, Quinidin is capable of restoring to the sino-auricular node the control of the heart so that, for a time at least, the working of the heart is normal. However, while those who report on the effects of Quinidin are fascinated by the possibilities of the application of this drug in medicine, they are wisely conservative in their statements and frankly admit that much is yet to be learned concerning its proper use. It is to be hoped that the few favorable reports will not lead to the indiscriminate use of the drug in every type of irregular and rapid type of heart (Journal A. M. A., December 3, 1921, page 1822).

Delano's Rheumatic Conqueror has had quite a vogue in some parts of the country and has even been prescribed by physicians. Analysis shows that it consists of starch, talc, chalk and a little quinine.

Butyn is a new local anesthetic which may, if its claims are verified, advantageously take the place of cocain in many eye cases. It is a chemical individual, and not a secret preparation, but has not yet been accepted by the Council simply because that body thinks the clinical work is not yet sufficient to justify its acceptance. It seems worthy of clinical trial, which alone will tell the tale, and may easily be obtained by any physician who cares to try it.

Intravenous Specialties—There sprung up all over the country a number of concerns making specialties and standard preparations for hypodermatic and intravenous use. Some of these concerns are undoubtedly honest and are getting out good preparations. Some are honest and competent and others are simply exploiting the medical profession and the public. Physicians should be particularly careful about using these preparations and should see that the manufacturer is thoroughly reputable and not simply a "fly-by-night" with a sleek detail man. There is always a certain amount of danger in giving even the best of any of these preparations, and patients who suffer an abscess occasionally threaten the physician with a malpractice suit. The best defense in such a case would be the reputation of the house making the ampoule.

Cod Liver Oil seems to be coming into its own again. This old household remedy was for a while discredited by most physicians who believed its sole value that of a food and therefore that it could be replaced by more palatable oils. The recent work on vitamines and the discovery that Cod Liver Oil is particularly rich in at least one of them has placed it back in favor. Its value in rickets has now been definitely proved by Park and Howland who took roentgenograms which show definitely that it will cure ricketts if the diet is not otherwise too faulty. In this connection it may be stated that some other experiments seem to indicate that ricketts can be cured by plenty of sunlight. Perhaps we have the mysterious vitamines acting in the one and the electron in the other.

Esters of the fatty acid of **chaulmoogra oil** are now marketed under the name of Chaulmestrol. This is a distinct advantage because the physician who has not a chemical laboratory at his disposal can now try this remedy.

Nuforal is a name of another alleged tuberculosis remedy now on the market for revenue only.

Sodium sulphate is one of the best antidotes for **phenol poisoning.** Alcohol, which has been largely accepted as an antidote, does more harm than good when taken into the stomach.

In many parts of the country the law requires the addition of alcohol to the solution of phenol before it can be sold indiscriminately. This seems a mistake as the alcohol probably makes it more easily miscible with the contents of the stomach and, therefore, more easily absorbed. Washing with alcohol does undoubtedly prevent the local escharotic action of phenol and if applied immediately prevents carbolic acid burns. Its action is probably that of a solvent and other solvents may do as well though there seems to be no experimental work on this subject.

Another wide-spread fallacy is the belief that no water must be applied to a **sulphuric acid burn** as the water will simply cause the evolution of heat and, therefore, intensify the burn. This may be so if only a small quantity of water is used but if a large quantity be used the sulphuric acid is diluted and washed away and the heat involved is negligible as compared with the cooling effect of the water.

The writer knows of at least one instance where a trifling sulphuric acid burn became rather serious because nothing at all was done for ten or fifteen minutes while waiting for bicarbonate of soda and oil. The addition of bicarbonate of soda evolves more heat than does the addition of water. Another fact not generally known is that low-boiling gasoline acts on bromine just as alcohol does on carbolic acid, so that if bromine be spilled on the skin no bad results will be noticed if the place be immediately thoroughly washed with gasoline.

Another Step Toward Free Medical Care for Everybody—According to the New York Post of March 29, the United States Government is conducting a public service clinic at 67 Hudson street, New York. This clinic is not only open to all Federal employes, but is also open to all civil service employes of the city of New York.

In spite of the fact that this clinic is expensively equipped and expensively maintained, it has been found necessary to secure newspaper publicity in order to get patients.

Clinics of this character cause further confusion in the minds of the public as to what is worth while in medicine.

New Director for State Department of Institutions—Mr. Ralph Fisher has resigned from this position and John A. Reily, M. D., formerly medical superintendent of the Southern California State Hospital, has been appointed to fill this important medical position.

EXTENSION WORK

The following additions have been made to the Extension Lecture courses offered by members of the State Society to local societies: (See November, February and March Journals for other lectures.)

MAX ROTHSCHILD,

350 Post Street, San Francisco.

1. The early diagnosis of lung diseases.
   With especial reference to X-ray and fluroscopic examinations, and to immune-biological tests.
2. The diagnosis and treatment of tuberculosis of bronchial glands in children.
   Demonstration of X-rays showing normal and pathological conditions in children. Discussion of specific and non-specific as well as symptomatic treatment.
3. The problem of immunity in tuberculosis.
   Discussion of different theories regarding this problem, with especial reference to the laws of immunity which have been established and generally accepted.
4. The treatment of tuberculosis with specific remedies.
   Description of the vaccines and sera usually administered. A modern classification of pathological conditions which forms the basis of determination for treatment. Demonstration of X-ray plates of cases treated.
5. The treatment of tuberculosis with non-specific remedies, with especial reference to preumothorax treatment.
   Discussion of dietetic and hygienic and general treatment, heliotherapy, artificial light, X-ray treatment, pneumothorax and thoracoplasty. Demonstration of X-ray plates of cases treated.

WM. C. VOORSANGER,

177 Post Street, San Francisco.

1. Pulmonary conditions wrongly diagnosed as Tuberculosis.
2. Tuberculous Laryngitis—Is It Curable? Heliotherapy as a remedy.
3. Gastro-Intestinal Complications in Pulmonary Tuberculosis.
   1. Functional.
   2. Organic.
   3. The use of Calcium Chloride intrevenously to allay abdominal pain and inhibit peristalsis.
4. Artificial Pneumo-thorax in the treatment of Pulmonary Tuberculosis.
5. What do tuberculin and vaccines really accomplish in the treatment of pulmonary tuberculosis?
6. Advances in the diagnosis of pulmonary tuberculosis.

EDWIN I. BARTLETT, M. D.,

291 Geary Street, San Francisco.

1. Diagnosis of malignant condition by means of the exploratory incision.
   This is a lantern slide lecture dealing with the scope of the exploratory with special application to breast conditions.
   There is a discussion of when to explore, how to explore, how to interpret the findings and how to handle the case after the diagnosis is made.
2. Tumors of the mouth and jaw.
   This is an illustrated lecture dealing with differential diagnosis—treatment and prognosis.
3. Bone tumors.
   A discussion of clinical and X-ray pictures, with special reference to differential diagnosis and treatment.

Diet for Bald-heads—Now comes a New Jersey doctor with a diet for bald-headed men. He tells them that criniculture is a matter of eating some things and refraining from eating others, and that a man can have as much thatch as he wishes if he is prepared to go on a diet. It is much like telling little boys and girls that they can have curly hair if they will eat their crusts.

But there is a serious and California side to the New Jersey doctor's bill of fare for the bald. In his list of seven aids to decorating the human dome with abundant foliage he includes prunes, raisins and oranges—all fruits for which California is famous. If his advice is taken then every day will be a raisin day and a prune day and day of the sun-kissed orange, and California's industries will boom as never before. The people of the prune and raisin belts should award the New Jersey doctor a gold medal (American Registered Pharmacist's Journal, February, 1922).

BOOKS RECEIVED

Books received are acknowledged in this column, and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. Selections will be made for review in the interests of our readers and as space permits.

Diseases of the Skin and the Eruptive Fevers. By Jay Frank Schamberg, M. D., Professor of Dermatology and Syphilis, Graduate School of Medicine, University of Pennsylvania. Fourth edition thoroughly revised. Octavo of 626 pages, 265 illustrations. Philadelphia and London: W. B. Saunders Company, 1921. Cloth, $5 net.

The Medical Interpreter. A digest in four numbers. The interpretation and translation of the world's practical medicine and surgery. Illustrated. Domestic and foreign. By Albert Alleman, A. B., M. D.

The Submucous Resection of the Nasal Septum. By W. Meddaugh Dunning, Consulting Otologist, Fordham Hospital, New York City. New York Surgery Publishing Company. 1921.

Ephraim McDowell. "Father of Ovariotomy" and founder of abdominal surgery. With an appendix on Jane Todd Crawford. By August Schachner, M. D., F. A. C. S. Philadelphia and London: J. B. Lippincott Company.

Abdominal Pain. By Prof. Dr. Norbert Ortner, Chief of the Second Medical Clinic at the University of Vienna. Authorized translation by William A. Brams, M. D., formerly Lieutenant Commander Medical Corps, U. S. N., and Dr. Alfred P. Luger, First Assistant, Second Medical Clinic, University of Vienna. New York: Rebman Company. 1922.

Epidemiology and Public Health. A text and reference book for physicians, medical students and health workers. In three volumes. By Victor C. Vaughan, M. D., LL. D., Assisted by Henry F. Vaughan, M. S., Ph. D., and George T. Palmer, M. S., Ph. D. Vol. 1, Respiratory Infections. St. Louis: C. V. Mosby Company. 1922.

Papers from the Mayo Foundation for Medical Education and Research and the Graduate School of Medicine of the University of Minnesota, covering the period of 1915-1920. Octavo volume of 695 pages with 203 illustrations. Philadelphia and London: W. B. Saunders Company, 1921. Cloth, $10 net.

Nutrition and Growth in Children, by William R. P. Emerson, A. B., M. D. 340 pages. Illustrated. New York and London: D. Appleton & Company, 1922.

The Vitamins, by H. C. Sherman, Professor of Food Chemistry, Columbia Unversity, and S. L. Smith, Specialist in Biological and Food Chemistry, United States Department of Agriculture. American Chemical Society Monograph Series. New York: The Chemical Catalog Company. 1922.

Basal Metabolism: Its Determination and Application. Frank B. Sanborn, M. S., Editor. Boston: Sanborn Company. 1922.

Pathogenic Micro-organisms—A practical manual for students, physicians, and health officers. By William Hallock Park, M. D., and Anna Wessels William, M. D., assisted by Charles Krumwiede, Jr., M. D. Seventh edition, enlarged and thoroughly revised. With 214 engravings and nine full-page plates. 786 pages. Philadelphia and New York: Lee & Febiger. 1920.

Practical Treatise on Diseases of the Skin—For the use of students and practitioners. By Oliver S. Ormsby, M. D. Second edition, thoroughly revised. Illustrated with 445 engravings and four plates in colors and monochrome. 1166 pages. Philadelphia and New York: Lea and Febiger. 1921.

Experimental Pharmacology—By Hugh McGuigan, Ph. D., M. D. Illustrated with 56 engravings and seven colored plates. Philadelphia and New York: Lea & Febiger. 1919.

Symptoms in the Diagnosis of Disease—By Hobart Amory Hare, M. D., B. Sc. Eighth edition, thoroughtly revised. Illustrated with 195 engravings and nine plates. Philadelphia and New York: Lea & Febiger. 1920.

Pitfalls—By A. J. Caffrey, M. D., instructor in physiology at Milwaukee Medical College from 1901 to 1910. Assistant Professor of Medicine at Marquette University School of Medicine from 1913 to 1920. Boston: Richard G. Badger, the Gorham Press. 1921.

Surgical Treatment of Non-Malignant Affections of the Stomach—By Charles Greene Cumston, M. D., and George Patry, M. D. Lecturers at at the University of Geneva and members of the Surgical Society of Switzerland. With an introduction by Sir Berkeley G. A. Moynihan, K. C. M. G., C. B., M. S., Professor of Clinical Surgery, University of Leeds. Philadelphia: J. B. Lippincott Company. Price, $5.

Tuberculosis in Infancy and Childhood—By J. Claxton Gittings, M. D., and Frank Crozer Knowles, M. D., and Astley P. C. Ashhurst, M. D. Illustrated. 273 pages. Philadelphia and London: J. B. Lippincott Company. 1922. Price, $5.

Skin and Venereal Diseases (Practical Medicine Series)—Edited by Oliver S. Ormsby, M. D., and James Herbert Mitchell, M. D. Vol. 7, Series 1921. 243 pages. Chicago: The Year Book Publishers. Price, $1.75.

Nervous and Mental Diseases (Practical Medicine Series)—Edited by Peter Bassoe, M. D. Vol. 8, Series 1921. 249 pages. Chicago: The Year Book Publishers. Price, $1.75.

An Essay on the Physiology of Mind, by Francis X. Dercum, M. D., Ph. D., Professor of Nervous and Mental Diseases in the Jefferson Medical College, Philadelhpia. 12mo of 150 pages. Philadelphia and London: W. B. Saunders Company. 1922. Cloth, $1.75 net.

New Medical Superintendent for Southern California State Hospital—Edwin Wayte, M. D., has been appointed medical superintendent of the Southern California State Hospital, to fill the vacancy caused by the promotion of John A. Reily, the former superintendent, to the position of director of the Department of Institutions of the State of California.

BOOK REVIEWS

Mechanics of the Digestive Tract—By Walter C. Alvarez. New York: Paul B. Hoeber. 1922.

An admirable book. Altogether admirable if in reading the chapters in which the author draws clinical conclusions from his laboratory experiments one will revert to the preface "and emphasize the fact that much of what is written in Chapters IX and X is purely suggestive."

Alvarez has carried out successfully a difficult task—that of writing a record of laboratory experiments for clinicians and practitioners to read. It takes an extraordinary man to combine laboratory and practice; one at once, as Alvarez is, a scientist and a clinician. There are very few Americans who have done this, or who could do it. The English have. This kind of work seems to go with what is best in the English mind, with a mind simple, logical, comprehending and comprehensive—such as Hunter's or Mackenzie's, Horsley's and Keith's—to name but a few of the best. The American prefers, or is able to follow but one of two courses: either to immure himself with a frog and a kymograph in a laboratory or to tear about from patient to patient in a motor car. Ability to combine the two kinds of activity is given to very few.

Let us hope, Dr. Alvarez, that your book may lead others on. There are hopes in the younger generation that it may fall here and there on fruitful ground. That many of the older men may follow it, or even trouble to lay down the Saturday Evening Post in order to read it, seems pretty hopeless.

Whether one entirely agrees with the book or not, especially whether the deductive chapters have not gone too far, is another question. We should like to see uremic hiccups and the sudden violent ileus following kidney operations explained in this chapter.

The make-up of the book evidences the author's care and good taste. The typography is excellent. The bibliography is a model. The references are culled from the diversest sources, chemical, botanical, and zoological; old and new; yet they are not diffuse but bear exactly on the end Alvarez has in view.

The book is worth reading and studying. L. E.

The Future Independence and Progress of American Medicine in the Age of Chemistry

Under this title is published the report of a special committee of the American Chemical Society. The volume contains much information of great value to research men in all phases of human progress. Thoughtful students of medicine and pathology will derive a great deal of value from a careful perusal of the report.

It is true that these same students will wonder why the report complains that "the direction of research is still essentially in the hands of medical men"; why the book is written in popular propaganda style; why efforts are being made to distribute one million copies of it and other whys.

The program of medical progress as outlined in the book seems to include "experts" and "specialists" in about every important science except clinical medicine. They do recognize a place for the experimental pathologist in the galaxy of scientific stars that is going to do so much but the physician apparently is an unnecessary element except as an agent to administer the new forthcoming specifics for various diseases.

We are treated to the conclusion that "each human body is now recognized to be a chemical

factory," thus forgetting what others have ignored that there is a mind and a soul that are not accounted for in their formulas and predictions.

It is a pity that such a fine collection of facts in such a worthy cause should be put forth in publicity by a million copies in an attempt to influence an audience of millions of readers most of whom are, of course, unable to understand or appreciate what it is all about. It is also a pity both from the standpoint of science and the good of all that the report increases the lack of confidence in physicians, which seems to be a fashionable custom of so many recent "scientific" reports.

The report is being distributed by "The Chemical Foundation," 81 Fulton Street, New York.

Essays on Surgical Subjects. By Sir Berkeley Moynihan, K. C. M. G., C. B., Leeds, England. Octavo of 253 pages, illustrated. Philadelhpia and London: W. B. Saunders Company, 1921. Cloth, $5 net.

A series of essays reprinted from various journals and collected in one volume. They are, as a whole, not equal to what we have come to expect from Moynihan's brilliant pen. A memorial essay on J. B. Murphy begins with a fine appreciation but soon digresses into an epitome of the whole history of medicine. A series of papers on peptic ulcer express Moynihan's views on treatment. He may, perhaps, have had occasion to change them a little in the three years since he wrote them. The pipings of a rising chorus of discontent with the operation of gastro-enterostomy are making themselves heard—most of them coming, it is true, from the internist's camp—but some of them, too, from the surgeon's. It will be interesting to hear Moynihan express his views ten years from now.

The best paper in the book, "The Ritual of a Surgical Operation," gives an insight into the reasons for his success as a surgeon. It is delightful to find so logical and thoughtful a development of pre-operative technique—a thing which to so many surgeons is a matter of indifferent and slipshod misarrangement. L. E.

New and Decadent Literature—"Why is it necessary to write about the indecencies of life when it is known that the young people of the present day will be the curious readers? The time will come, of course, after a surfeiting of this stuff, when it will cause a moral nausea, and the better class of literature will come again into its own."—The Journal-Lancet, March 1, 1922.

What Next?—"And the same necessity which compelled Jesus to accept His apostles from the ignorant fishermen of Galilee, rather than from among the scribes, pharisees and publicans of His day, now compels the Chiropractic schools to accept those who present themselves for students, and with this material as the warp and woof to weave the fabric of the Chiropractic profession."—(Quoted from a half-page advertisement in the Metropolitan Magazine).

Gas and Oxygen—The consumption of gas and oxygen for purposes of anesthesia is rapidly increasing throughout the country and particularly in the hospitals of California. This increased demand for these very useful but dangerous substances is liable to become an attractive field for ultra commercialists who are more desirous of making money than of producing a thoroughly reliable drug. Once more we wish to caution our members, and hospitals in particular, to be careful as to what and how and at what price they buy their gas and oxygen, and to be particularly careful about unusually attractive commercial propositions in this field.

POTASH AND PERLMUTTER ON "NEW DOCTORS"

(By Montague Glass in the San Francisco Chronicle of Sunday, April 2, 1922)

"Yes, Maruss," Abe Potash said, as he read in the paper of the latest attempt to license massage operators as doctors, "nowadays a lot of fellers expect you to call them doctor when you talk to them, which only a few years ago would have been glad if anyone called them mister even. In fact, Hey, you! Say! or even Psst! was the most respect they ever got from anybody, and today they are doctors yet! An idea!" Potash and Perlmutter say many other interesting and amusing things in the article referred to.

Kind-to-Animals Week—In the kindness-to-animals week let us extol the blessings of vivi-section to animals. By sacrificing a few hogs to a more comfortable death than cholera the whole porcine kind can be free of the agonies of hog cholera. A needle prick and a slight fever in a few cattle saves millions of cattle from anthrax.

Even the moral example, the avoidance of inflicting pain, the true sense of animal values of the vivisectors, has spread their lesson of kindness to animals.

When you send your precious pet to the dog hospital the skilled treatment it gets there is the product of vivisection. So let us make every humane society a center of vivisection propaganda and devote the kindness-to-animals week to inculcating kindness, the humanity, the merciful pain-saving of vivisection.—(Chester Rowell, in San Francisco Bulletin.)

Agitation for Free Choice of Physician in New York and What It Leads To (by Oliver G. Browne, published by The Self-Insurers' Association)—Physicians who are interested in industrial medicine or in the problem of the socialization of medicine or paternalistic government in general will find some most interesting reading in this little pamphlet of three pages. It shows what some laymen think of the medical profession.

The Physician As An Instructor in Health—"Only by utilizing the general practitioner as a health agent can the public receive the health information it needs and desires. When it is realized that disease in its preventive stages rarely comes to the notice of health officers, the role of the doctor assumes great importance. In order to further preventive medicine in Great Britain, the author urges that medical students become instructors in health as well as physicians in disease, that the Council of the British Medical Association inaugurate a constructive disease prevention policy, and that the medical profession assume the responsibility of maintaining the nation's health, not leaving it entirely in the hands of voluntary agencies and public health officials."—Sir Napier Burnett in Nation's Health.

An Unusual and Efficient Method of Furnishing Medical Care to Poor People—The city of Redlands, San Bernardino County, allows its poor people to have the services of any physician in the city whom they choose to call. All the physician has to do about his fee is to make out his bill in accordance with the fee schedule of the State Industrial Accident Commission and the bill is paid by the city treasurer. So far as the information is available this system has worked to the entire satisfaction of the physicians, is extremely satisfactory to poor people, and the cost to the city treasury has not proved to be large. This method might with advantage to all people be copied by other cities.

Obituary

E. M. Fly, M. D., National City, California.

This month we are called upon to chronicle the death of Dr. Edward Monroe Fly for the past twenty-four years one of the most prominent physicians and surgeons of San Diego County. He died after a short illness following an attack of influenza.

Dr. Fly was one of the men who will be missed most by those who knew him best, as his many acts of charity and kindness to his patients were only known to himself and those who were most intimately acquainted with him.

Dr. Fly was born in Easton, Pa., October 13, 1866. Received his early education at Trachs Academy at Easton, Pa., and later graduated from Lafayette College, receiving the degree of A. B. in 1888 and A. M. in 1891. Following this he taught school for several years, then was assistant superintendent of Holmes Sanitarium at Hudson, Wisconsin. Later he studied medicine at the University of Minnesota and Jefferson Medical College, graduating from the latter in June, 1894. He practiced medicine in Plumsteadville, Pa., for three years, when his ambition for a larger field caused him to give up his Plumsteadville practice and seek a new field in the southwest. Arriving in San Diego he decided on National City as being a good opening for his future activities, where he started in with his usual vim and energy, establishing for himself a reputation second to none.

He was prominent in all medical and social activities of the local medical societies, member of the A. M. A., State Medical Society of California, San Diego County Medical Society, American College of Surgeons and the Academy of Medicine. He was an ex-president of his county society and had frequently represented it in the councils of the state organization. He was also a member of the Shriners, Scottish Rite, Knights of Pythias, Odd Fellows, Elks, Woodmen of the World, the University Club of San Diego, and the San Diego Country Club.

Dr. Fly's ability, generosity, integrity, and courtesy were by-words of his many friends. His ability to work and get at the bottom of conditions that baffled others was his delight. Always firm in his beliefs and opinions until they were proven wrong. He was endowed with physical power for an unlimited amount of work, working with his patients all day and studying until the small hours of the morning was his custom. This fact was probably a factor in his early and untimely death.

He will be greatly missed in the community as a citizen, in the medical profession as a leader, and a man that any community could ill afford to lose. E. S. C.

H. BURT ELLIS, M. D.

(Born May 17, 1863. Died April 15, 1922.)

Dr. Ellis was one of the most prominent physicians in California. He located in Los Angeles in 1884. He had served as president of the Southern California Medical Association, the Los Angeles County Medical Association, the California State Medical Society, and was a Fellow of the A. M. A.

DEATHS

Adams, James T. Died in Berkeley, Calif., April 27, 1922. Was a graduate of University of Vermont, 1896. Licensed in California, 1920.

Briggs, A. E. Died April 10, 1922, in Sacramento. Was a graduate of Medical Department, University of Illinois, 1896. Licensed in California, 1898.

Ellis, H. Bert. Died in Los Angeles, April 15, 1922. A past president of the Medical Society of the State of California. Was a graduate of the College of Medicine, University of Southern California, 1888. Licensed here, 1889.

Fiske, Harold A. Died in Los Angeles, April 18, 1922. Was a graduate of the Medical Department, University of Vermont, 1895. Licensed in California, 1901. Was a member of the Medical Society of the State of California.

Mansfield, I. L. R. Died in Oroville, Calif, April 28, 1922. Was a graduate of Philadelphia University of Medicine and Surgery, Pa., 1869. Licensed in California, 1878.

Medros, J. J. Died in Oakland, April 8, 1922. Was a graduate of Cooper Medical College, California, 1894. Licensed in California, 1895. Was a member of the Medical Society of the State of California.

Weeks, Robert Eaton. Died in Los Angeles, April 8, 1922. Was a graduate of Detroit College of Medicine, Michigan, 1904. Licensed in California, 1920. Was a member of the Medical Society of the State of California.

White, Harry O. Died in San Francisco, April 23, 1922. Was a graduate of Harvey Medical College, Chicago, Ill., 1896, and University of Illinois Medical College, 1904. Licensed in California, 1915.

Wilder, C. H. Died in Oakland, Calif., April 9, 1922. Was a graduate of College of Physicians and Surgeons, Illinois, 1895. Licensed in California, 1904.

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ORIGINAL ARTICLES

RESPONSIBILITY FOR STATEMENTS AND CONCLUSIONS IN ORIGINAL ARTICLES

The author of an article appearing in the JOURNAL is entirely responsible for all statements and conclusions. These may or may not be in harmony with the views of the editorial staff. Furthermore, authors are largely responsible for the language and method of presenting their subjects. All manuscripts will be carefully read, but editorial privileges will be exercised only to a very limited extent. It is believed that the manner of presentation of any subject by any author determines to no small degree the value of his conclusions. Therefore, both the author and the reader, in our opinion, are entitled to have the subject as presented by the author as little disturbed as possible by the editors. However, the right to reduce or reject any article is always reserved.

SOME PRACTICABLE PROBLEMS CONFRONTING THE MEDICAL PROFESSION *

PRESIDENT'S INAUGURAL ADDRESS

By H. G. BRAINERD, M. D., Los Angeles

We have reason to congratulate our profession for what it has accomplished in the matter of protecting the public since the last meeting of this Society, namely: the defeat of the so-called "quack quartet" amendments to our State Constitution. The campaign against these amendments was carried on by the League for Conservation of Public Health in a masterly and successful manner, and we tender to the League our congratulations. But we should bear in mind that this was accomplished by the help of that portion of the general public which believes in the altruism of our profession, believes that our efforts were actuated by our desire to protect the public, and not merely by selfish interests.

If the rising tide of poorly equipped aspirants to practice medicine—those who are trying to acquire the title of "doctor," and the right to treat the sick without the proper educational training—if this tide is to be checked, we as a united profession should do our utmost to influence our patients and acquaintances so that they will vote against any measure which tends to lower the standard of requirements for the admission to the practice of medicine. The work of poorly educated physicians must inevitably increase the length of disability as well as the mortality of the sick. And that our efforts should be made most effective in preventing dangerous legislation this coming session of the Legislature, every doctor in the State should join the League, which so successfully conducted the campaign last year.

A few days ago a patient told me that he had been devoting his time to a physician for nearly a month, during which time he was put through a basal metabolism test, urinalyses, a blood count and a Wassermann test, a test meal and stomach contents analysis, tests to determine the condition of his bile, bismuth meal, and X-ray of stomach and bowels. After which he was presented with a bill for two hundred and fifty dollars, and the opinion that there was nothing the matter with him. In point of fact he was suffering from melancholia from an easily found cause.

Another man of moderate means told me recently that a surgeon performed an operation on him, attended him for two weeks after, and presented him with a bill for seven thousand five hundred dollars. Now it happened that several of this patient's friends had been operated for similar trouble, and some of them were able to leave the hospital sooner than he. And, as they had paid from one hundred to one thousand dollars, he naturally felt that he had been robbed.

Such experiences do not tend to increase the respect for the members of our profession as honorable citizens, or exalt them as learned physicians. It is this sort of thing that helps to foster and perpetuate quackery and charlatanism. Let each one of us remember that every time we are careless in the treatment of our patients, every time we violate the confidence reposed in us, every time we are unjust in our charges for our services, we are not only likely to make enemies for ourselves, but also enemies to the medical profession in general.

It is these, and similar embittering experiences, that are responsible in part, at least, for the establishment of new sects in medicine. The birth and survival of any new sect is concrete proof that something is lacking in the principles or the practice of medicine at that period.

Thus, a century ago, Hahnemann was able to found a new sect because it voiced a protest by the public against the large and nauseous doses prescribed by the old-line physician. A generation ago Doctor Still was able to establish a new sect largely because by his method a physical examination was made, an opinion promptly given, and treatment begun immediately without the bugbear of delayed and expensive laboratory examination and purchase of expensive drugs. And this sect, by reason of less expensive services, prompt diagnosis, and treatment beginning at once, has appealed to a large number of people.

It is an unfortunate fact that the public everywhere exaggerates our shortcomings and minimizes our good deeds. Indeed, it never seems to occur to most persons that every successful step in

* Read before the Fifty-first Annual Meeting of the Medical Society of the State of California, Yosemite Valley, May, 1922.

public health work curtails the income of the physician; and that the thousands upon thousands of free beds in hospitals where free medical services of every kind are given, cut in directly upon the physicians' means of existence. Yet it is to the everlasting credit of our profession, that the very poor everywhere in our land can receive the very best medical treatment available.

At the present time, through the efforts and generosity of the medical profession, the very poor and penniless persons are provided for in case of sickness. But there is another class, and probably the largest and most important class of all, for whom no such provision is made. I refer to persons of moderate means who find it very difficult in case of severe illness to obtain the medical treatment and care that is now available only to the rich and the very poor.

Here is a case in point: An acquaintance of mine recently had typhoid and I tried to find a hospital for him. I applied to five large hospitals and could find but one that would accept him at all, and that at a rate of fifty dollars a week. In addition, the hospital would require two nurses at seven dollars and fifty cents a day each, and the attending physician's charge would be five dollars a visit—a total of one hundred and ninety dollars a week, exclusive of medicine and the cost of personal laundry. As the patient's salary was one hundred dollars a week, this hospital treatment was out of the question. So a less expensive doctor and less expensive nursing were obtained, and the patient was successfully cared for in his apartment.

This single case illustrates a condition that exists in every community today. It is estimated that less than 10 per cent of the people of the United States are able to pay the present fee bill rate of doctors, nurses and hospitals through a long sickness. But there are five times as many who do not wish to be classed as paupers by accepting free medical and hospital services which are now available for the very poor.

This condition is a reflection upon our civilization, but certainly not a reflection upon the medical profession; for most of the medical charity in the world emanates from the regular medical profession, and all of preventive medicine also comes from this source. But, having accomplished so much, I believe it is up to our profession to accomplish still more by devising some means whereby people in moderate circumstances can receive prompt and efficient medical attention at a price within their ability to pay. If our profession does not do this, State medicine, or some other equally distasteful method, is inevitable.

The increase of knowledge in physio-chemistry that has taken place in recent years is, indeed, astounding, and especially along the lines of metabolism and blood conditions. And, also, the advance in the various other means of making diagnoses. Yet it does not follow because of these greatly increased aids of the laboratory that we should subject every patient to the ordeal of having all these things tried out on him. And it is my opinion that the physician should exhaust all his ability and resources at hand before he subjects his patient to the expense and loss of time required by such examinations. For there are many cases in which any observing physician can make a correct diagnosis without this elaborate and expensive laboratory investigation. And resorting to such methods in simple cases often tends to discredit the knowledge and judgment of the physician in the eyes of his patient.

The situation is very different in obscure cases. And, of course, in such cases free use should be made of all the expert opinion and scientific methods available. But the patient should not be sent from one physician to another, or to a succession of laboratories, unless it is absolutely necessary for an accurate diagnosis. And I wish to urge the physician not to neglect his own knowledge, training, and powers of personal observation to the extent of placing dependence upon laboratory diagnosis alone. He should always bear in mind the personal equation and psychology of his patients, which the laboratory does not consider at all. And remember that encouragement, which gives hope, unquestionably hastens the progress of recovery in almost every disease, and that discouragement tends to retard recovery. It is our neglect of this common sense psychology, and its adoption by charlatans, that, in a measure at least, is responsible for the establishment and continuance of the various sects in medicine.

Bear in mind that humanity is governed very largely by emotional rather than by scientific thinking. And if we neglect this great factor in the practice of our profession, the status of our profession will suffer proportionately in the opinion of the public at large.

After writing the above I found the following editorial in the New York Medical Journal:

PHYSICIANS NEEDED

"Columbia University is one of the most richly endowed and the largest of the universities, and its school of medicine has been one of the most progressive in adopting new laboratory courses and enlarging its curriculum. In his annual report as president of the university, Dr. Nicholas Murray Butler presents some important matters in regard to medical education. 'The true aim of the medical school,' says President Butler, 'should be to give instruction in fundamental principles and methods, to bring the students into contact with realities, to train him in habits of observation and inference as to physiological and pathological phenomena, and to give him knowledge of where to look for the additional or specialized information that he may need before his own experience has sufficiently widened and deepened to bring it to him.'"

President Butler realizes that the purpose of the medical school is primarily to train physicians, and not scientific investigators. "It would be a sorry day," says Dr. Butler, "for the public health and for the public satisfaction if the physician of large, practical experience, wide human sympathy and keen insight into human nature, were to yield his place to the expert with the miscroscope and the test tube. The scientific aspects of medicine must not be permitted to override its human aspects."

Dr. Butler has put into words a feeling which

is prevalent throughout a large portion of the medical profession. The true province of the physician is to heal the sick. Under the rapid development of specialism in medicine this function has been lost sight of in some of the larger medical schools, which train scientific investigators instead of physicians. There is need for scientific investigators, but the crying need is for men of broad medical education whose senses and powers of observation, as well as their minds, have been carefully trained; men who depend mainly on their own trained powers of observation and deduction rather than on the differential blood count, the sphygmographic tracing of the electrocardiogram, or the findings of the test tube. All of these aids to diagnosis are of value and should be made use of, but none of them can take the place of the trained and acute observer.

The leaders in medical education have made the mistake of trying to combine the laboratory specialist with the general practitioner, and as a consequence the public has suffered and is suffering from a dearth of doctors.

We were very much pleased to note recently that the Association of Chemists, which had been working during the war for our Government, devising destructive explosives, poisonous gases and other methods for taking human life, is now putting its strength into investigation that will tend to prolong life. Thus another important body of scientific investigators have joined our ranks—have become allied with a profession whose aims have always been conservation of life and health.

Another problem coming before the medical profession with steadily increasing importance is to determine the status of the lay psycho-analyst and the lay psychologist. It is a well-established fact that many cases of mental abnormality, and mental unbalance, are due to definite physical disorders. And it seems hardly proper that persons unable to diagnose physical ailments should be permitted to direct the care of mental cases whose condition may be dependent upon such ailments. It is, indeed, presumptuous for such half-trained persons to attempt the treatment of such cases—a striking example of how really dangerous a little knowledge may be in the field of medicine.

A somewhat similar sentiment may be expressed about another branch of investigation and actual accomplishment of psychology. I refer to the recently developed method of measuring human intelligence. Making due allowance for the over-enthusiastic claims as to the scientific accuracy of such tests, it seems to be fairly well established that it is now possible to measure a certain department of an individual's intellect and determine with fair accuracy just what degree of intelligence he possesses as compared with other normal individuals. But such measurements apply to one department of the human intellect only, and do not offer a means of measuring such vital things as judgment, courage, initiative, morality, honesty, or many forms of mental aberrations and abnormalities. And yet, certain persons trained in this laboratory method of making mental tests are arrogating to themselves the ability to thus judge human nature in all its complicated phases. But in the last analysis the correct judgment of individual human nature is still best determined by those whose training is largely obtained in the great natural laboratory of human contact and observation. At present, as in the past, no class of persons receive as complete training in this great "laboratory," or are as good practical psychologists, as the physicians.

The present status of the medical expert in giving evidence in the court is most unsatisfactory. A very excellent bill in regard to such evidence was introduced and passed by a recent legislature, but failed to receive the governor's signature. This bill applied not solely to physicians, it is true, but perhaps more largely than to any other professional class. A bill somewhat similar to the one just referred to will be introduced in the next Legislature, and will meet its principal opposition from the legal fraternity, notwithstanding the fact that most judges, and the better class of the legal profession, apparently favor some change in the present system.

According to the methods now in vogue, the expert is employed by one of the litigants, and is, therefore, likely to have a partisan bias. Furthermore, the hypothetical question propounded to this expert usually minimizes those facts which are inimical to the party that employed him, while facts of the opposite character are introduced and stressed as much as possible. And thus it follows that the expert of necessity becomes something of a partisan because he does not have all the facts presented to him in their true perspective.

The bill to be presented this winter will make the calling of an expert by the court a necessity, and will provide to have all the facts presented to him before forming an opinion. We trust that the bill will receive the hearty support of the medical profession.

It has been shown very forcibly that the majority of the criminals who are repeaters are mental defectives, a still larger percentage of persons in the almshouses who are cared for by the public are also mentally defective, and likewise a very large percentage of prostitutes. Moreover, the fact stands unchallenged that the greatest source of mental defect is defective parentage.

The place for the early detection of these mental defects is the public school, and it seems to me that the State should take steps to search out all defective individuals during these formative years of childhood. And if such defectives become delinquents, the State should make provision for their future care, and should take means to prevent the propagation of their kind.

And meanwhile let us go forward unitedly raising our morale and our scientific attainment to the highest possible standard, so that our actual accomplishment will convince the public that the members of the regular medical profession place the best interest of their patients and of the community above their own selfish interests.

Four hundred years before the Christian era Hippocrates and his school caused everyone who was to start practice as a physician to take the most solemn oath, as follows:

"I swear by Apollo, the physician, and by Escu-

lapius, and I call Hygeia and Panacea and all the gods and goddesses to witness that to the best of my power and judgment I will keep this oath, to-wit:

"I will adopt that system of regimen which, according to my ability and judgment, I consider for the benefit of my patients, and will protect them from everything noxious and injurious. I will give no deadly medicine to anyone, even if asked, nor will I give any such counsel, and similarly I will not give to a woman the means of procuring an abortion. With purity and with holiness I will pass my life and practice my art. Into whatever houses I enter I will go into them for the benefit of the sick, keeping myself aloof from every voluntary act of injustice and corruption and lust. Whatever in the course of my professional practice, or outside of it, I see or hear which ought not to be spread abroad, I will not divulge, as reckoning that all such should be kept secret."

It was the custom in this country and in Europe to administer this oath to applicants for graduation in medicine, and I would urge that there be a return to that custom in our medical schools, and that this oath in bold type should be where the eyes of the practitioner would frequently rest upon it.

Shall we, who have had the benefit of twenty centuries of Christian teaching, have less high ideals than those of the heathen Greek?

"THE LIE DETECTOR"

Recently in reporting a medical congress for the public press, a reporter "discovered the ophthalmoscope." He told in fine headlines how, with this new instrument, the physician could look into the eye and could see many things, including the brain. The article inferred that this instrument was a recent discovery and physicians were urged to adopt it as one of their important instruments of precision. Of course, every physician knows that the principle of the ophthalmoscope has been in use for hundreds of years and that the instrument was made practical seventy-one years ago.

California is seeing much of the same sort of "publicity" regarding the sphygmomanometer. Here also the principle involved has been used by physicians almost since the discovery of the circulation of the blood. It has been a recognized instrument of precision in diagnosis for about a quarter of a century.

There also is nothing new in using the principle to detect feigning or suppressed and masked emotions. It is, of course, well known that disturbances of the emotions, from whatever cause, produce fluctuations in blood pressure, respiratory control and many other functions. That the sphygmomanometer or any modification of it will distinguish between types of emotion or physical being accurately enough to be accepted as evidence in murder trials certainly remains to be proved. Many physicians who use the sphygmomanometer frequently in their daily work will pronounce the "lie detector" a liar.

MEDICAL EDUCATION OF PRESENT AND NEAR FUTURE*

By RAY LYMAN WILBUR, M. D., Stanford University, California.

The present generation has witnessed a complete transformation of medical education in America. The apprentice method was followed by the lecture system with demonstrations in anatomy, pathology and various clinical subjects. This in turn has been more recently supplanted by the laboratory, the small bedside clinic and various forms of hospital work, including in some institutions a required interne year. A study of much of our present medical practice shows that it is based largely upon pathology rather than physiology. This has been a natural outgowth of the development in the use of the microscope, the study of autopsy evidence and the growth of the science of bacteriology. In brief, as a result of our methods of training we can say that the art of medicine has been largely based upon the use of drugs and that the art of surgery has been likewise based upon pathology removable by the knife. Because of the importance laid upon anatomy and pathology in the training of medical men and the general desire for perfection or one hundred per cent result, which is characteristic of the American, we have gone through a stage in which there has been an insistence upon the part of the surgeon and gynecologist that his patient should be brought up to the standard of a so-called normal topographical anatomy. By surgical means there has been a very definite attempt to see that all organs were located in definite positions rather than to make a careful study of the physiology of the organs, which is, of course, of outstanding importance. Anyone who will look over the text books of gynecology of a decade ago cannot help but be impressed with the pedantic insistence of the gynecologists as to the so-called normal position of the uterus. Fortunately in this sphere normality of function is being recognized as the final test.

Particularly since the enlightening and epoch-making work of Louis Pasteur there has been an enormous growth of medical knowledge. Science in every field has made rapid strides forward and many of the advances made have been brought by the medical profession into the field of diagnosis or of therapeusis. While there has been an increase in the time required for the course leading up to the degree of Doctor of Medicine and while preliminary subjects, such as physics, chemistry, biology and languages, have been insisted upon, there has been a constant stuffing of the medical curriculum with all of the new methods and facts so that we can say that at the present time the curriculum and courses of the medical school have been *inclusive* in so far as possible.

The time has now come for the curriculum to be studied from the standpoint of *selection* and

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exclusion rather than from that of inclusion. In one way or another we must reduce the actual amount of time consumed in obtaining a medical education and we must reduce the content of the medical course by the most rigid selection of that which is fit to survive and that which is necessary in order to turn out a safe practitioner. The efforts of the last decade in medical education have been directed towards fewer and better medical schools, better fundamental work and the gathering together of the necessary funds for the large expense involved with the bringing of the laboratory and the bedside clinic into the medical school. There has been by one process or another, largely because of increasing requirements on the part of the individual medical school, a limitation of medical students which has almost reached the danger line of providing too few skilled and trained men for the service of the public. When we realize that it takes at least twenty-five years, practically half of a man's life, to prepare himself for medicine and that there is a vast amount of energy and expense involved in each individual case, it becomes of vital importance for us to see that there is no waste either of money or of energy in obtaining the result.

One of the most troublesome tendencies of present medical education has been associated with the rapid development of the various specialties. There has been a marked refinement of technique and a great increase in the technical appliances in all of these specialties. They have been more and more crowded into the medical curriculum until they have seriously interfered with the necessary development of the basic subjects of medicine, surgery, obstetrics and gynecology in the clinical years. In fact the result has been that many students have done considerable work along special lines before they have received the degree of Doctor of Medicine.

We must return to the basic idea that the granting of the degree of Doctor of Medicine means that a student is capable of handling the ordinary problems of general practice. This is certainly necessary before he can be safely trusted to advance in any special field. In the ordinary small community we find the general merchandise store. One can obtain there the essentials of human life in ordinary existence. If one wants any special appliance or something unusual it takes time to obtain delivery and one must either send or go to a larger field. This illustrates general practice and also the requirements for every medical man. In our larger centers we have the department store, where there is a marked extension of everything represented in a general merchandise store with experts in charge of each department. Medicine, likewise, is handled in this way where specialists in various lines are available. In the general merchandise store the proprietor knows everything that he has on hand and how to guide his customer to get promptly the essential things that he needs. In the general department store much is left to the customer himself. Without guidance he may overpurchase in a single department when his real needs lie in another. It is inevitable that there shall be these two forms of organization. One of the ways to protect the person who deals largely with specialists is to have the specialist understand thoroughly the essentials of general medical practice.

The bringing of the university spirit into medicine, which has accompanied the development of the laboratory, has not been without its defects. That very accuracy which is required for scientific work of a university grade has been inclined to make us somewhat too pedantic and to seek for impossible accuracy. It has also been inclined to make the medical profession poor psychologists. We have been so intent upon the actual chemical and other processes involved in the care of our patients that we have neglected the mental reactions of the individual concerned. It has been hard for us to realize that the man with syphilis needs healing of the mind as well as the giving of arsenical preparations to kill the spirochaetae invading his body. We have also been neglectful of the fact that the sick man out of a job needs light work and mental repose as well as diet and nitroglycerine for his high blood pressure. The cold scientific turn of thought that must necessarily go with the laboratory method needs the leavening effect of intimate association of all medical teachers with all classes of ailing humanity.

The experiment of bringing the so-called full-time academic teacher into medicine has been successful where the full-time teacher has had the privileges of the ordinary academic professor of mapping out his program of life for himself. We cannot expect a satisfactory development of medical teachers if we overemphasize the protection of the laboratory and the clinic ward to such an extent that a man does not have to develop the proper psychological and mental attitude required for the art of medicine. One reason why we have been losing our grip to some extent upon our patients is that we have lost the personal touch and the feeling of responsibility for the individual's life in all its phases.

It seems quite clear that it is impossible for us to grant more time for the preparation of medical students, so that we must modify to a marked degree our present curriculum and see that there is a definite selection of subjects and courses. With these points in mind, what shall be the program for the development of medical students in the near future?

In the first place, it is evident that the basic work must be the same. No man can hope to enter the medical field who is not thoroughly familiar with physics, chemistry and biology. He must also have that general knowledge that any good citizen who is to be a leader requires. He must likewise have familiarity with at least one foreign language, so that he may come in contact with the medical spirit and medical literature of another

nation. Beyond this we must recognize that the profession of medicine is definitely committed to:

1. Preventive medicine,
2. Relief of the sick, and that all of its work is based primarily on:
1. Etiology,
2. Perverted or pathological physiology,
3. Diagnosis,
4. All known forms of relief.

We must recognize that preventive medicine as fostered by the medical profession has completely changed the practice of medicine.

In the early days in Philadelphia the medical practitioners had to deal with jail fever or typhus, smallpox, cholera and yellow fever. Modern sanitary practice and engineering have changed our relationship to many diseases common a few years ago. Typhoid is an excellent example. I saw an autopsy on a case of typhoid fever in Munich which attracted the attention of the whole profession of Bavaria because such a thing was a rarity, and yet some of the greatest studies upon typhoid fever were made in Munich because it was a constant focus of infection, as were many of the cities of Europe. A rearrangement of the water supply was responsible largely for the change.

The type of practice of a decade ago permitted much symptomatic treatment. Diseases were allowed to run their course. The doctor was, in a way, the protector and nurse and comforter of the patient. The marked advances made in preventive medicine make it inevitable that the medical student of today and tomorrow must study the normal more than the abnormal and that he must be familiar with the incipient stages of all disease processes and recognize the first perversions from normal physiology and the first signs of abnormal pathology. The old easy practice of medicine has gone never to return. Great skill in the recognition of the early stages of disease means pre-eminence in medicine in the future. It is unfortunate that these periods of the beginning of disease are most susceptible to quackery and to deceit. We are all familiar with the phrase "threatened with pneumonia" or "threatened with disease." It is also inevitable that the very fact that we are able to relieve patients in the early stages of their diseases will in a way interfere with their interpretation of our success.

The man who has an early operation for appendicitis often has such an easy time following his operation and during his convalescence that he sometimes wonders whether the operation was necessary. There is still great respect for the doctor who lets the patient go so far that he is only able to save him by the most energetic and persistent attention. This need not interfere with sound medicine and an increase in the respect on the part of the public for medicine. There is a gradually rising level of intelligence among our people, and more and more of them are getting some biological understanding of life.

In particular, we must prepare the medical student for practice among the children who are now growing up in our schools, where they are obtaining considerable knowledge of nutrition, physical training, the general facts of biology and many of the facts of preventive medicine. The child who is being weighed and measured at the school and told what it is desirable for him to eat in order that he may grow will have very different ideas from those of us who have grown up in the present generation, for our childhood was full of health precepts, the development of so-called health foods, and we were certainly influenced by the period of quack advertisement represented by Lydia E. Pinkham and the lost manhood group.

Our physician in the near future must have new conceptions of disease and its effects upon collective human living. He must be a social leader and must recognize that the one great possession of the human race is its germ plasm. This germ plasm needs guardianship from disease and other malign influences, for if it deteriorates a family or a race soon dies out. The profession of medicine has been most advanced in its willingness to accept new facts and to use them at once for the relief of the sick. At the same time, the traditions of the profession have been very powerful and there has been a constant tendency to look backward as well as to look well to the front. We cannot fail to recognize that we have been over-enthusiastic many times in the reception we have given to apparent discoveries. Fortunately, these waves of interest soon die out and leave, for the most part, a firm residue of fact and truth behind. We are forunate now in seeing the unsavory mess of Freudianism replaced by endocrinology. Just what the next thing will be, it is hard to say, but it will soon be upon us. Like all human beings, we keep reaching out for the final panacea in the hope that we can give general relief to everyone. Our whole history tells us that we must build our medical structure slowly brick by brick.

With the complexity of modern life many new forces have been added to those of the doctor in handling the sick. We must readjust our curriculum so that the young physician can be trained for the leadership of his lieutenants:

1. The trained nurse.
2. The physiotherapist.
3. The dietitian.
4. The radiologist.
5. The laboratory worker.
6. The social service worker.

The control of lieutenants means that some administrative training is requisite for the physician.

It seems to me that in making the new adjustments in the medical course we should proceed along the following lines:

1. Squeeze out the non-essentials.
2. Bring in hygiene and preventive medicine as working assets.
3. Make the graduate a general practitioner, not an expert in any particular field.
4. Direct a tangible, earnest study of all recog-

nized methods of treatment, not seek for panaceas, but give relief from suffering.

5. Have actual practical work in the clinics and laboratories, which must be brought closely together.
6. Develop mental clinics and the study of psychology.

The doctor of medicine in the future must be the master in the field of the prevention of and the relief from the ills that beset mankind. He must be versed in:

1. The anatomy, physiology, chemistry and pathology of the human body.
2. He must be thoroughly familiar with the life histories of and the effects produced by the parasites that live in us and cause most of our ills.
3. He must know individual and group psychology.
4. He must know something of our social organization and economic life.
5. He must be an expert diagnostician of the early stages of disease and a personal therapeutist selecting and using all known and tried methods of relief.

The medical man who is unwilling to obtain this necessary fundamental training and to see that a specific service is rendered to the patient by him or by some one of his appointed lieutenants should take up some form of medical work which does not require contact with the patient. Each one of the lieutenants of a doctor has taken away from him a certain amount of his contact with the patient. He can at least secure intimate association with the patient through a most careful physical examination. This, with the history, should establish that intimate feeling between the patient and the doctor that is requisite for confidence and success.

We must frankly recognize the fact that, as a profession, we are thought of too much in terms of drugs and the knife and that we have become somewhat isolated from the sick patient because of the machinery that we have built up. The success of the illy trained individual who deals with the sick comes largely from his direct contact with the patient and the mental effect produced therefrom. Each one of the various cults has some element of fact as its basis, often of a purely psychological nature.

We should study every field of therapeusis with our scientific methods and extract from each field the things that are serviceable and worth while. The medical profession should set the battlefields of the future in the matter of therapeusis rather than have them set for them, as is the case today. The only cure for the quack who now adds so much to the sum of human woe is to train our medical students to do their work so well and to get the medical profession to unite so thoroughly in their administration of prevention and relief that every member of our human society gets his share. We cannot afford to take care of only the very poor who appeal to our sympathies and of the well-to-do who can pay us well for our services. We must organize the medical services of our community so that all may be offered the advantages of modern medical science. We must remember that the sick man is a social unit. He needs help for himself physically and mentally and for his family. We must establish the proper relationship of the sick individual to the community and be the connecting link in this relationship. Finances is only a small portion, although the most obvious one, of this relationship. We have the knowledge, we have the organization, we have the traditions of prevention and treatment. The problem is in our hands. I think that we can rely upon the medical students now in our medical schools, if they are given the proper guidance. Their quality is excellent. I doubt if there is any better aggregation of brains in the country. The training required for the degree of Doctor of Medicine in a first-class medical school today exceeds that for the degree of Doctor of Philosophy. These men and women are capable of meeting the problems along the lines suggested, in the near future, if we will lay the basis now.

The physician who cares for the individual and foresees and prevents the disasters that involve his body and mind and the engineer who lays the basis for safe and economic life will be the leaders in the years ahead.

PROVISIONS OF WORKMEN'S COMPENSATION ACT OF CALIFORNIA RELATIVE TO FURNISHING OF MEDICAL TREATMENT IN COMPENSATION CASES. *

By W. H. PILLSBURY
Attorney for Industrial Accident Commission

Primarily, the rights and duties of a physician in treating any case are fixed by his contract with the party ordering his services. The person requesting his services expressly or impliedly agrees to pay him for them, and he agrees to furnish his skill and care. If the agreement between the parties specifies a fixed amount as payment, both sides are bound by the agreement; if not, the physician is entitled to collect the reasonable value of his services, to be fixed by the court with reference to standard prices for similar services.

The Workmen's Compensation Act does not change this fundamental contractual basis. The physician still looks to the person asking him to treat the case for payment, either in an agreed amount or for the reasonable value of his services. All that the Compensation Act does is to give an additional recourse under certain circumstances, as indicated below.

The Compensation Act requires the employer, or if the employer be insured, his insurance company, to *furnish* necessary medical treatment. Correlative with this duty is the right of the employer

* Read before San Francisco Medical Society, January 17, 1922.

or insurance company to select the physicians to treat the case. In furnishing treatment such physician is usually hired by the insurance company and is to be paid by the insurance company upon ordinary principles of contract, as indicated above. If, however, the employer or insurance company neglect or refuse to promptly furnish medical treatment, the injured employe is not obliged to go without treatment, but can immediately call in a physician of his own choice, for whose services the employer or insurance company must eventually pay. In such case the physician has his ordinary contractual right against the person calling him into the case, and also has a right under the Workmen's Compensation Act to hold the insurance company for the reasonable value of his services. In such case the question of reasonable value is to be fixed by the Industrial Accident Commission instead of by the courts. In fixing the reasonable value the commission is obliged, if the litigants are technically inclined, to listen to testimony of other physicians, etc., as to standard charges for such treatment. As a matter of practical expediency, however, the parties almost always agree to leave the determination of the fee to the medical director of the Industrial Accident Commission, and his decision is almost never appealed from.

In addition to furnishing an attending physician, hospital treatment, medical supplies, crutches, etc., the insurance company is also obliged under the Compensation Act in any serious case to furnish the services of a consulting physician to be named and paid by the insurance company. If the employe is dissatisfied with the attending physician, he is entitled, without proving any good cause for dissatisfaction, to ask the employer once for a change of physicians. In that case the employer must nominate at least three additional practicing physicians competent to treat the particular case, from whom the employe is entitled to choose.

The employe is entitled to only the one change of physicians. If he is dissatisfied with the list of three he may, however, require the Industrial Accident Commission to approve the competency for the case of these physicians. This does not mean that the commission personally examines each physician and expresses its view of their qualifications; it only means that the commission, if invoked, will consider whether the physicians on this list hold themselves out to be specialists in the line necessary to treat the particular case. For instance, the commission would not approve the nomination of an eye specialist for orthopedic work, or vice versa. Here again, as a matter of practice, the certification is always left by mutual consent to the medical director of the commission, upon whose advice the commission acts.

In all cases the injured employe, if further dissatisfied, can call in his own physician without loss of compensation payments, the only bad result in such case being that the employe must pay his own medical expenses thereafter. The same is true if he desires additional consulting or other physicians.

THE PROBLEMS OF INDUSTRIAL ACCIDENT INSURANCE*

By JAMES H. PARKINSON, M. D., Sacramento

The first part of this address constitutes the report of the Committee on Industrial Accident Insurance and is published on page 244 of this issue of the Journal.

There are certain general facts or principles involved in the question of Industrial Medicine that the profession must keep constantly before it.

Compensation insurance with which we are now struggling is only one phase of a movement which may be generally described as socialized or centralized State medicine. Its logical conclusion is the centralization of all medical activities in the State, and the elimination of a profession functioning as individual or independent physicians. Special phases of the question are the so-called welfare work and social work. All these various activities function by and through the medical profession without which they cannot be conducted. They have been enormously stimulated by artificial conditions in time of war and have been fostered and encouraged by a most generous, charitable and patriotic profession. Directly or indirectly these agencies are fed and nursed by the taxpayer and so have helped the State expenditures to the appalling figure of $60,000,000 for the year 1920, the last figures available, or an increase of 220 per cent from the figures of 1910, when these activities first commenced.

As citizens, members of the profession must carefully consider the trend of the times, for the signs on every hand point to a general revolt against the conditions and a recognition for the need of reform lest the revenue raising capacity of the State be exhausted.

As significant of this trend of opinion, the following brief extract is in point:

Mr. John A. Edgerton, president of the National Association of Manufacturers, speaking at their annual convention in New York on May 9, 1922, says:

> The chief economic problem of the day is there are too many middlemen in the industrial fabric, with too many persons engaged in distributing the products turned out by the farmer and the manufacturer.
>
> When we add to this excess of distributors, the countless number of whose chief activities are to reform, regulate, inspect, denounce, tax, plunder, and otherwise live upon those who are trying to produce something, it will not be difficult to discover the principal factor in the continuing high cost of living.

In connection with the question before us today, I would strongly commend to your attention the article of Dr. Goodale appearing in the May number of the State Journal. By permission of the Secretary I will now read a letter from the Fund, which also bears upon the subject:

Dear Dr. Musgrave:

It would seem incompatible with my public duty to pass without comment the article in your May issue by Dr. George W. Goodale under the head, "A Statement of the Problems of Industrial Medicine in California." It is also possible that your

* Presented at the Fifty-first Annual Meeting of the Medical Society of the State of California, at Yosemite National Park, May 15, 1922.

readers would be interested in a statement from me as repesenting the official viewpoint of the State Compensation Insurance Fund.

The motive behind Dr. Goodale's article can only be guessed, but his picture of the situation is so palpably inconsistent with his relation to the compensation system and his operations in the past, and his own conception of the law creating the State Compensation Insurance Fund is so out of harmony with the expressed intent of the statute, that his statements of fact should not be allowed to go unchallenged.

The article referred to is obviously intended to arouse a feeling on the part of physicians that they are about to face a dangerous economic situation brought about by compctition between this fund and other insurance carriers. Contrary to that picture, the most recent development of moment was the adoption by the Medical Society of the State of California, after careful consideration by a special committee of a fee schedule for industrial cases intended to represent a 25 per cent increase in remuneration to physicians and surgeons. This increased schedule was then formally approved by the Industrial Accident Commission. I have it, on no less authority than a member of Dr. Goodale's staff and from other surgeons specializing in industrial service, that the previous fees were considered by them to be ample for those doing industrial work in volume and that those men doing the bulk of the active work permitted others less interested to bring about the increase.

If there is any tendency to grind physicians between the millstones of competition, that tendency has been encouraged by those practicing industrial surgery who have, through desire for a volume of work, entered into agreements with insurance companies to accept fees less than those specified in the schedule or to do the work on a basis of a percentage of premiums which brings about the same result. Being one of those engaging in such practices (as recently admitted by one of his associates), it ill behooves Dr. Goodale to intimate that this fund and insurance companies are the ones upon whom the medical fraternity should place the blame. It is a well-known fact that the State Compensation Insurance Fund has held itself above participation in such practices and has endeavored to avoid business dealings with those medical men engaging in them, but it seems pertinent to predict that failure to adopt effective means to prevent such a thing will force the larger insurance carriers to give service through salaried surgeons as a matter of self-preservation in the competitive insurance field.

The author of the article to which we are taking exception has seen fit to refer at some length to the State Compensation Insurance Fund in a way which can only be considered as a thinly veiled criticism of its operation and management. He states: "The original intent of the law was not that the State Fund should be a competitor of the companies in the sense of a business competitor . . ." and proceeds to determine for his readers the real intent of the law. It is deserving of passing mention that his conclusions are not borne out by the law itself and are not concurred in by those charged with the responsibility of interpreting the statutory intent while under oath of office and official bond. The law states specifically that the fund is to be "fairly competitive," that it is to "ultimately become neither more nor less than self-supporting." The law says nothing whatever about its establishment as a regulatory institution, though it is to be admitted that it could not well exercise such a function without soliciting patronage and becoming an important factor in the competitive field. Dr. Goodale plainly states that the management of the fund has fallen into "the common fault of bureaucracy . . ." We must take emphatic issue with that statement and, if needs be, support our claim to a freedom from any such tendency by overwhelming evidence from satisfied patrons, industrial claimants and those medical men who have had sufficient dealings with the fund to know its methods.

I will not attempt to point out all of the misstatements contained in the article, but as examples will mention the following:

It is stated that the law prohibited the State Fund from paying brokerage fees. This is not correct. Payment or non-payment of brokerage was left to the judgment of the management.

It is further stated in referring to the Experience Rating Plan that: "This, if carried out correctly, would do away with the advantage of the State Fund, . . ." That statement is untrue, as the Experience Rating Plan is used by the fund as well as by the companies and is intended to establish a credit for one risk and a debit for another without affecting the general rate level. It could have no bearing upon the fund's ability to pay dividends to policy holders because those dividends are paid largely from savings in administration expense. Here again the doctor is wrong when he states: "Administrative expenses are practically stationary and afford little opportunity for saving." As a matter of fact, the administrative expenses of the corporate companies vary from 30 per cent to 50 per cent, while the administrative expense of the State Fund has averaged about 13 per cent of premiums.

The author of the article mentioned refers to "Rebating by the State Fund as a business propaganda, . . ." That is a rather bold statement, as there is a statute which makes "rebating" a serious offense, and there is a vast difference between "rebating" and paying dividends from profits actually earned. The fund does not engage in "rebating" either in fact or as "propaganda."

It has long been known that certain doctors have engaged in the practice of entering into contracts for medical service at less than fee schedule rates, and the names of many of those doctors are likewise known. Perhaps the setting up of a "wolf cry" may have a tendency to divert attention to other sources as representing a greater menace to members of your Society, but I think we can safely rely upon the common sense of your members to see that the real danger lies in the activities of those doctors who will not co-operate in maintaining a reasonable schedule of fees for industrial surgery.

It is obvious that some insurance companies will purchase medical service as cheaply as possible, and there is absolutely no way to prevent that practice except through control of your own members. Both the Industrial Accident Commission and the management of this fund have co-operated fully in attempts to maintain the schedule of fees and that high character of service thereunder which would bring about the best results to those persons in whose interests the compensation law was enacted. It is a well-known fact that the same cannot be said of some of the members of your Society who have attempted to commercialize practice under the compensation system and who, it seems to me, are on dangerous ground when they use the word "exploitation."

Cordially yours,
(Signed) C. W. FELLOWS,
Manager.

The Fund, organized for the purposes which are enumerated in the Act creating it, has accumulated a very large sum of money which, I

understand, has long since passed the million mark. I venture to predict that the next step in State medicine will be the establishment of State hospitals at selected points, and the creation of a salaried staff to do State compensation work.

In this connection I would call your attention to the significant fact mentioned in our report of last year that, at the previous session of the Legislature, a bill was introduced prohibiting any private or commercial company from writing compensation insurance in California.

We should, however, first clean house. The appropriations now standing in the name of the profession are well over the million mark and unwarranted by our needs or necessities.

What are the remedies? The education and cultivation of public opinion and the enactment of the necessary legislation. A law that will place all State activities more directly within the law and under the jurisdiction of the courts seems a first necessity. A provision for an independent medical tribunal is scarcely of less importance. You have initiated the organization of the necessary machinery; it only remains for you to perfect and use it.

A Poor Foundation—The chiropractors of California are not laying a good foundation for their demand for a new law by openly defying the present law.

The State Board of Examiners announces an examination, at which the chiropractors and other drugless healers can obtain certificates under the present law by showing proficiency in those fundamentals of knowledge without which no practice of the healing art, whether by chiropractic or any other method, is safe to the public.

They will not be examined either in medicine or in chiropractic, but on those sciences in which there is no pretense of sectarian difference. There are no sects of chemistry, physiology, anatomy, bacteriology, and the rest. There are no conflicting dogmas or theories involved. One simply knows them or does not know them. Any chiropractor who knows them can get a certificate to practice. He is not required to know medicine, if he does not propose to practice it, and it is taken for granted that he knows chiropractic enough, provided he knows the other things, without which no one can safely use chiropractic or any other method.

This is the law. Every scientifically educated man regards it as a good law. However, if the chiropractors can convince the majority of the people that the scientifically trained minority are mistaken, it is their right to change the law. It is not their right to defy the law while it is the law.

This is what they are doing. They are practicing without licenses, against the law. When they are convinced they refuse to pay fines and go instead to jail to pose as martyrs, on the pretext that the law which forbids them to practice without license also gives them no opportunity to get the license. Then when, under the law, the opportunity is offered, the Chiropractors' Campaign Committee of California issues a public statement calling on its practitioners to refuse to take the examination and to ignore the law. Which, let it be repeated, is a very poor foundation for asking the people to change the law.—Chester Rowell, San Francisco Bulletin, June 5, 1922.

SUCCESSFUL REMOVAL OF AN EXTRA-MEDULLARY CORD TUMOR IN THE LOWER DORSAL REGION, CAUSING SEVERE COMPRESSION SYMPTOMS—RECOVERY.

By WALTER F. SCHALLER, M. D., and ALANSON WEEKS, M. D., San Francisco

SUMMARY OF CASE.

Onset with severe dorsal root pain, followed by motor loss in left lower extremity and evidence of both cord and root compression below the ninth dorsal cord segment. Progressive paraplegia by involvement of right lower extremity. Predominant flexor "shortening" paralysis. Bilateral pathological pyramidal tract signs and heightened tendon reflexes in lower extremities. Positive Beevor sign. Superficial sensation affected below the tenth dorsal root distribution for pain and temperature. Deep sensation affected particularly for vibration sense. Reflex movements of defense present. Absence of sphincter involvement. Colonic crises. Compression syndrome in cerebrospinal fluid. At operation complete removal of an intradural glioma at the eleventh dorsal cord segment. Convalescent period complicated by anemia, toxic polyneuritis, decubitus. Ultimate complete recovery.

MEDICAL PART.

(By Walter F. Schaller, M. D.)

The patient,* aged 45, was first seen by me on June 23, 1919, at the request of Dr. Alanson Weeks, who at this date had been called in charge and who suspected a cord lesion. Previously well, a man of exceptional physical and mental vigor, the patient's first symptom was pain in the left lower abdomen, superficial and not deep, but severe enough to seriously bother him and cause him to seek medical advice. This was about December 20, 1918. A searching medical examination by a number of consultants, aided by Roentgenographic examination of the abdomen, of the spine, chest, gastro-intestinal tract, and the teeth, revealed nothing definitely abnormal. An apparently bound down sigmoid had at one time suggested the advisability of an exploratory laparotomy, which, however, was not performed. A lumbar puncture was done, the fluid showing no increase in cells or protein content. The Wassermann reaction was negative in the fluid as well as in the blood.

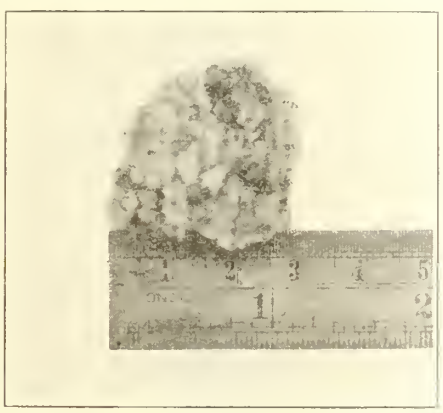
Under symptomatic treatment, hydro-therapy and climatic change, the patient did not improve and opiates were necessary at times to alleviate pain. At the time of my first examination pain was still the most prominent symptom, although considerable motor weakness had developed in the left lower extremity. The pain was more or less constant, of a toothachy character, sometimes lancinating and always worse at night. It was located principally on the left side at the level of the umbilicus, but was also present on the

* Charles M. Fickert, then District Attorney of San Francisco, with whose permission this record is published.

right side below the costal margin, and would often radiate as a distinctly girdle pain to the back. Ordinary exercise, such as walking, had at times caused the pain to disappear. Relief was obtained by sitting in a certain chair at home. In fact, the patient could not rest lying in an ordinary bed and would spend a considerable portion of the night either sitting or standing at the foot of his bed, back bent, and arms grasping the foot of the bed for support. Arising from a sitting or reclining position was particularly painful and the patient would change his posture very carefully, slowly and laboriously.

Shortly before examination additional Roentgenograms of the spine were taken and interpreted as negative. At this period Dr. Ray Lyman Wilbur, who saw the patient, suspected a cord lesion because of an extensor toe reflex.

Examination.—Intellectually the patient was clear, self-contained, not emotional and made the appearance of a man who was under great physical discomfort and pain. There was an apparent loss in weight. An inspection of the musculature of the buttocks and of the upper posterior thighs showed some atrophy in these



Extramedullary Cord Tumor (Glioma) at D_{11}—3x1¼ cm.

localities. Measurement at the top of the left thigh showed a difference of 4 cm. less as compared with the right. In the lower part of the left thigh (12 cm. above top of patella) there was a difference of 1 cm. The spine was held quite rigid, although there was no definite muscular spasm on either side; a moderate amount of both flexion and extension was possible in both lumbar and dorsal regions. The patient claimed great weakness in the left lower extremity; for instance, he could not place the left heel to the opposite knee, whereas this maneuver could be done with the right heel, but at the expense of considerable effort and pain. He could stand unsupported, but swayed to the point of falling with his eyes closed. A considerable edema was noted about the feet and ankles, which was supposed to be due to the long continued dependent position of these members. The blood pressure was 150 systolic, 90 diastolic. Reflexes: The patellar jerks were quite lively but equal; the ankle jerks were moderately lively. The upper tendon reflexes were apparently equal. There was no patellar or ankle clonus. The abdominal reflexes were doubtfully present, but both cremasteric reflexes were definitely present. The Babinski reflex appeared to be positive on both sides, more typically so on the right side, as the response on the left was brusque and jerky, simulating a voluntary motion. The Gordon and Oppenheim tests were negative. Sensibility: Touch was felt fairly well in the lower extremities, but pain and temperature sensations were altered below the segmental lovel of D_{10} on both sides. Deep sensibility, tested by the vibration fork and also by notion of position, was markedly affected in the lower extremities, the vibrations of the fork being scarcely perceived over the malleoli. The handgrips were forceful. The left lower extremity was paretic, as above described, but the muscle tonus in this member did not seem to be noticeably altered. There was some fibrillation present in the lower extremities, perhaps due to exposure (unclad in a room only moderately warm). The pupils reacted to light, the right promptly, the left perhaps less so; the left pupil may have been a trifle larger than the right. The cranial nerves were otherwise apparently negative. There were no speech defects and no facial paresis. Hearing and sight were not complained of. The nurse's chart showed nothing of importance concerning pulse, respiration or temperature.

The impression following this first examination was a paraplegia, and a traumatic radiculitis in the dorsal region due to compression of the cord and corresponding spinal roots.

Progress of the Case.—As the patient was more comfortable in the sitting position and often spent the greater part of the night in this posture, an orthopedic bed was arranged so that the legs were flexed on the thighs and the thighs flexed on the trunk. The edema was considerably lessened by this procedure. It was necessary to relieve pain by analgesics, which were given freely and in combination. On coughing, pain was complained of. Tenderness was experienced by percussion over the seventh dorsal spine. The patient stated that from the onset of his pain he had difficulty in expelling flatus per rectum. Constipation was a distressing symptom. On July 25 there were two enormous evacuations of formed fecal matter and these were followed by several other large evacuations on the following morning; in all, patient had perhaps eight or ten evacuations within a period of twenty-four hours, the nurse stating that over two large chamberfuls of formed fecal matter were passed, representing a weight of perhaps eight or ten pounds. A state of exhaustion ensued, with a temperature of 103 F. and a pulse of 106. The next day, however, the patient had a normal pulse and temperature and felt generally better, with less pain. The history was obtained that he had such an experience about two months before, accompanied by fever and increased pulse rate. These attacks were interpreted as an overflow from a distended and paretic bowel. Throughout the illness there had been no involvement of the bladder function or of the bladder sphincter.

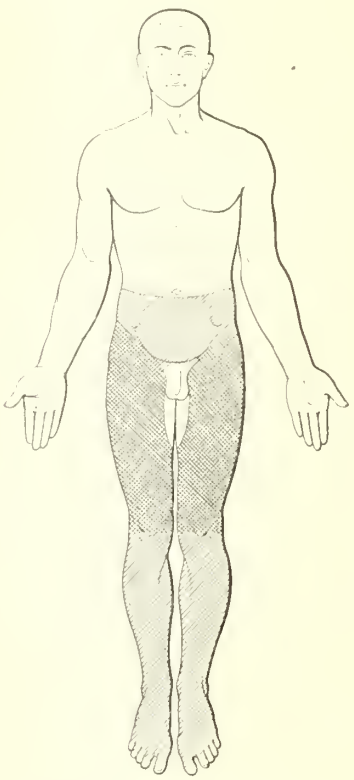
On January 30, 1919, a consultation was held between Drs. Alanson Weeks, Martin Fisher and Walter F. Schaller. Dr. Fisher made a personal examination and believed that the condition was due to either one of two causes in order of their probability: Firstly, compression of the cord; secondly, metastatic infection from a focus in tonsils or teeth, or some other focus. Following this consultation a tonsillectomy was done by Dr. E. D. Shortlidge. Mercury inunctions were then started for therapeutic and diagnostic purposes. After a course of these had been given without any benefit, and the motor weakness became greater, they were discontinued. Re-examination of Roentgenograms revealed no other abnormality than a decided scoliosis of the dorsal spine. No anemia was present on repeated blood tests. The patient was frequently re-examined as to the condition of both sensory and motor systems and the state of his reflexes.

Objective Sensation.—Light touch with cotton fiber was practically intact. Temperature and pain were definitely affected; pain relatively more so than temperature. These disturbed sensations were noticed below D_{10}, but were more pronounced below D_{12}, where heat and cold were at times confused, at times not felt as temperature, and pin-prick was identified as a point but often not felt as pain. As between D_{10} and D_{12} sensation was relatively less disturbed in the legs. A reference to the charts will show conserved areas of riding-breeches design, representing the lowest sacral root innervation.

Reflexes.—When sensation was examined involuntary flexor responses in the nature of defense reactions in the lower extremities were present when stimuli (most noticeable with pain) were applied to the inner parts of the legs and thighs, but also when applied to the outer sides of the legs and outer sides of the feet. The tendon reflexes remained very active, thus typifying a spastic paraplegia, although in one of the last examinations before operation the left ankle jerk was not elicited with certainty. Ankle clonus finally developed, but not patellar clonus. The abdominal reflexes which were at first present changed in that the upper ones were finally doubtfully present. The Babinski extensor toe response remained bilaterally constantly positive. The Gordon and Oppenheim reflexes became questionably positive in the right lower extremity, but not in the left.

Motor System.—The paraplegia gradually increased up to the time of operation; weakness had been greater always in the left lower extremity, and became also very marked in the right, so that finally the patient could not stand even with support. The atrophy in the glutei and posterior thigh muscles increased. A distinct physiological grouping in the relative involvement of muscle groups was observed as follows: In the left lower extremity, those muscles which shortened the extremity—viz., extensors of the toes, dorsal flexors of the ankle, flexors of the leg on the thigh and flexors of the thigh on the pelvis—were very weak, as compared with their antagonists or muscles which lengthened the extremity. Finally, however, as the paralysis increased a paresis was noticed in the extensors of the left leg on the thigh. In the right lower extremity this "shortening paralysis" was also noted and began at the hip and knee joints and only later included those muscles which dorsally flex the right ankle. The progression of the paralysis, therefore, was predominantly flexor in both extremities and progressed from the proximal to the distal portions of the extremities. The extensor muscles were only later involved.

Motor segmental weakness was searched for after the suggestion of Holmes and was found in the upper recti. A positive Beevor's sign was present; in the sitting position an attempt to contract the abdominal muscles revealed a paresis below the navel manifested by a flaccidity of the muscles, but the recti above the navel contracted and the navel ascended. Further, palpation of the intercostal spaces on expiration revealed a decided difference in the tonus of the intercostal muscles of the ninth and tenth spaces, as compared with the intercostal muscles above; the fingers could be deeply pressed in between the ribs in these localities, whereas higher the firm resistance of the normal muscles could be felt. A subsequent examination revealed hypotonic muscles in the eighth and ninth spaces.

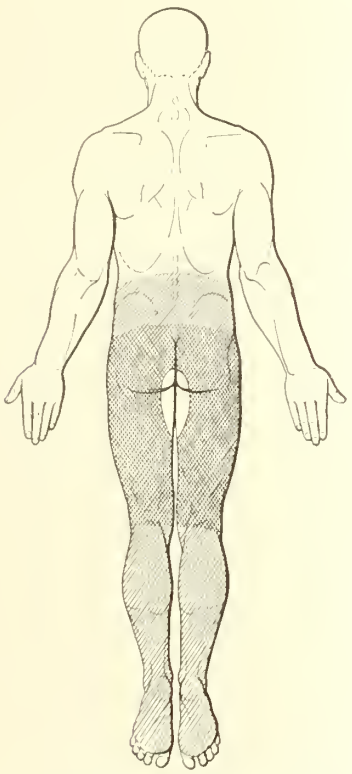


Crossed areas represent disturbed sensation for pain and for temperature. Light touch conserved over the same areas. The uncrossed areas represent conserved sensation.

On August 2 a lumbar puncture was performed and clear cerebrospinal fluid obtained. The pressure was not increased. The laboratory reports

follow: Total cells (red and white) 29, leucocytes 1 per cmm. Nonne and Noguchi tests for globulin strongly positive. Wasserman reaction, cholesterinized beef heart antigen, negative in all amounts.

It will thus be seen that the cerebrospinal fluid showed a typical compression syndrome and that syphillis could be definitely eliminated. A diagnosis was made of an extramedullary tumor situated on the posterior and left aspects of the cord between the ninth and the eleventh dorsal segments. The surgeon was advised to remove the sixth and seventh vertebral spines, which procedure should uncover the tumor.



Crossed areas represent disturbed sensation for pain and for temperature. Light touch conserved over the same areas. The uncrossed areas represent conserved sensation.

SURGICAL PART

(By Alanson Weeks, M. D.)

Operation.—On August 4, 1919, a laminectomy was done by Dr. Alanson Weeks, assisted by Dr. Edmund Butler. Present at the operation: Drs. Schaller and Lennon, the latter having independently examined the patient previously and made a diagnosis of cord tumor.

The seventh dorsal spine was removed, then the sixth, and the laminae removed. As the dura was approached a thickened yellowish tissue was found extradurally, which was thought to compress the cord, and the fifth spine and lamina were removed. This tissue, however, seemed fibrous and was later identified as the ligamentum subflava. Abundant hemorrhage complicated the operation, causing considerable delays. The eighth spine was removed, the bleeding arrested, and the dura opened. At the extreme lower level of the dural opening—i. e., about the eleventh dorsal cord segment and opposite to the eighth dorsal spine—a tumor was seen, causing a considerable depression in the cord on the left lateral surface. This was completely exposed by removal of another spine—the ninth—and the tumor, which lay encapsulated between the dura and the cord, was completely removed. The wound was closed in its several layers, and the patient was removed from the table in excellent condition.

The tumor was of soft consistency, measuring 3 x1½ cm., was quite friable and broke into two portions when removed. The consistency and appearance of the tumor suggested a cellular growth. It was histologically examined by Dr. William Ophuls, whose report follows:

Sections show a fairly cellular tumor consisting of bundles of short fusiform cells between which there are many delicate fibrils, which do not stain with the Van Gieson method. In places there are many large blood capillaries. Few mitoses. Some fibrous tissue about the blood vessels. Glioma.

POST-OPERATIVE COURSE

In the first three days following the operation the patient was quite restless, at times nauseated, but was, generally speaking, in fairly good physical condition. His pain was controlled by morphine as was necessary. The pulse, although high at times (122), was of good quality. The temperature averaged about 100 degrees F. At midnight on August 6 there was a rise in temperature to 101° F. and the chart noted that patient was at times mildly delirious. August 9: "Wriggled toes of left foot." He had two chills on this date with temperature following of 103° F. and 103° F. It was then noticed that pressure areas over sacrum and the right hip, which showed circulatory disturbances and abrasions before the operation, had broken down. The usual changes in postures were insufficient to control the extension of these processes, so on August 14 the patient was placed in the prone position following the development of a pressure area on the left hip. The wounds were irrigated and dressed daily. The patient was weak, depressed, irritable and complained of pain in both hips, and particularly in the left hip. A blood count on August 14 revealed 2,600,000 red cells, with 58 per cent hemoglobin. On August 17 a blood transfusion of 500 cc. was done. The red count then gradually but slowly increased until, on February 25, 1920, the count was 4,000,000 red cells, with 67 per cent hemoglobin.

Because of the sepsis following the small pressure sore present at the time of the operation and the big abscess which followed in the gluteal region and over the sacrum, the patient was in a more or less critical condition—very toxic, with a septic temperature as high as 103 degrees F., perspiring at times profusely, losing weight, with poor appetite; irritable and sleepless because of pain and discomfort. Involuntary cramp-like

contractions in the flexors of the lower extremities was a distressing complication. These contractions persisted until the middle of January, 1920, interfering with rest and sleep, as they would awaken patient at night. The temperature finally fell on September 27, to remain down with only an occasional remission afterwards. Notwithstanding the decubital wounds, which still discharged for months, the patient was evidently on a fair road to recovery. He was kept in the prone position continuously until his temperature became normal, and part of the time for weeks and months afterwards. Toward the latter part of September another complication arose, which was the cause of much additional suffering to the patient and much perplexity to his attending physicians. Pain in the left shoulder was bitterly complained of, extending down the left upper extremity and progressing to the right shoulder and down this extremity. Opiates were necessary for rest and sleep. Soon muscular atrophy was noticed in the dorsal interossei of the hands and later in the triceps. Both hand-grips were weak. However, the upper tendon reflexes were conserved. It was an open question whether this complication was caused by another compressive lesion in the cervical region similar to that found in the dorsal region, or whether it was due to a postural traumatic neuritis from the patient being in the prone position so long, or whether a polyneuritis had developed from pyogenic infection. The ultimate course and eventually complete recovery made this last condition seem most probable.

Clinical Notes of Convalescent Period.—On November 3, 1919, the operative wound in the back had completely healed and decubitus in the left hip had practically healed, but over the sacrum there was a granulating area and a small fistula exuding some pus; over the right hip there was still a gaping wound, clean, about three or four inches in length, which ran down between muscle planes to the great trochanter. These two wounds persisted until the latter part of February, 1920. The neuritis of the upper extremities gradually subsided, so that in January the pain had disappeared, although weakness of the upper extremities still remained.

The first definite improvement in the lower extremities was noted early in November, when the muscular force at the ankles and knees was decidedly increased, and disturbed sensation for pain and for temperature was decreased. At this period, however, notion of the position of the great toes was still faulty and the vibration sense was also still profoundly affected over the bony prominences of the left ankle. The Babinski reflex, although still present bilaterally, was less pronounced, especially on the left side. This reflex finally disappeared in March, 1920.

Toward the last of November, 1919, the patient was able to stand with support; two months later he was able to take several steps with but slight support; in March, 1920, he was able to take a few steps unaided, and commenced to be about on crutches. There still remained, however, some strophy of the glutei, especially on the right side, and these muscles were distinctly hypo-active to both the faradic and galvanic currents.

Involuntary tonic contractions, which were especially marked after operation, were among the last symptoms to disappear, and persisted as a tendency even after the patient could walk quite well. These contractions were most marked in the right lower extremity and were finally only present in the early morning. Also at this time (March) superficial sensation had returned except for occasional confusion of temperature sensation below the knee. Postural sensation had returned. Osseous sensibility was not yet felt normally over the malleoli.

In July, 1920, the patient again reported. He had made a complete recovery, walking without any abnormality of gait. He had suffered no inconvenience from a recent walk of five miles; no pain, weakness or instability remained.

COMMENT

From the neurological standpoint the complete recovery after the severe paralytic compression of the cord was remarkable. The exquisite predominant flexor paralysis suggested either a close anatomical grouping of physiologically related motor tracts in the cord or a greater susceptibility of these tracts to pressure. The motor segmental weakness was an important guide in establishing the level of the lesion. The sensitiveness of the seventh dorsal spine seemed to be of diagnostic importance. The conserved vesical and rectal functions were exceptional in the presence of the marked paraplegia. The colonic crises were perhaps explained by a splanchnic paralysis due to an abrupt change in intra-abdominal pressure.

The sparing of touch sensation, with the involvement of both pain and temperature sensation, has been described by Dejerine as characteristic of cord compression. The shifting character and variations in disturbed superficial sensation has been noted previously in compressive lesions. The marked disturbance of the vibration sense would tend to confirm Mingazzini's statement that the fibers which transmit vibration run in the vicinity of the pyramidal tract and that their disturbed function is concomitant with a disturbed pyramidal tract function. Relief of pain and distress on coughing by the flexor position suggested root tension. The evident polyneuritis which this patient suffered as a complication was one of the relatively rare cases following infection. Noteworthy was the long continued painful involuntary reflexes in the lower extremities.

From the surgical standpoint the removal of five spinous processes and laminae had not apparently interfered with the free motion or usefulness of the spinal column. Immediately placing patients in the prone position following spinal operations for paralysis is recommended because of the danger of causation or extension of decubitus.

CLINICIANS PAST, PRESENT AND FUTURE

By HERBERT C. MOFFITT, M. D., San Francisco

The word clinic meant originally a bed or a bed-ridden person. A clinician is one who studies disease at the bedside or, broadly, "one who makes a practical study of disease in the persons of those afflicted by it." That clinician is now used most often as synonymous with internist is an admonition to the straying feet of surgeons and specialists.

We speak complacently of the limitations of the ancient physician, but think on the other hand of some of his advantages: no piles of ever-multiplying journals to load his desk, little bothersome technique to acquire, few cumbersome machines to transport to the bedside; no solicitous drug house to dictate his treatment; opportunity to use each one of his special senses, time to exercise his *common* sense; a hazy idea of the internal mechanism of the body, what it looked like and how it worked, but at least the chance to see a body left fairly whole unless lopped by war, and to study the reaction of this body at different stages of its development to disease of all kinds. As far back as two to three thousand years before Hippocrates, observation and experience had advanced medicine fairly far along certain lines in Mesopotamia, India and Egypt. Physicians had acquired libraries of written lore, been divided into varied cults, seen the rise of varied specialties. Even group medicine was foreshadowed in the Babylonian custom of placing patients in the market place so that all who passed might question, examine and give an opinion about the disease.

No one can dispute that Hippocrates must rank as one of the world's great clinicians. Pliny would have him the first clinician—"for there arose Hippocrates who received and set on foot again the ancient practice of Aesculapius . . . and being borne in Coos a renowned and wealthie island altogether devote and consecrated to Aesculapius he made an extract of all receits, which were found written in the temple of the said God . . . and after that the said temple was burned, hee professed the course of Physicke which is called Clinice (that is Chamber—Physicke, so called because hee visited his patients lying sicke in bed)." About the clinic at Coos and about other Esculapian temples as well gathered students who were systematically instructed and to whom before entering practice the Hippocratic oath was administered. Histories of patients were taken, physical examinations carefully made, methods of treatment —especially hydrotherapy — demonstrated. The physician and the priest worked side by side in the temple, and faith entered largely as a factor into cure. Harmony was more perfect, results of treatment at least as good as in the Emanuel movement of our own days. The compilations of Hippocrates and his followers still will repay the medical student, and commentaries of the Grecian and Roman periods show problems in medical teaching and practice much like our own. The unity of the profession was early split by dogmatists, methodists, empirics, eclectics, pneumatists and other cults. Of making many books there was even then no end. As Osler wrote: "The little by-play between Socrates and Euthydemus suggests an advanced condition of medical literature; 'of course, you who have so many books are going in for being a doctor,' says Socrates, and then he adds, 'there are so many books on medicine, you know.'" There was not wanting protest even then against increasing complexity of medicine; Thessalus of Tralles, who grew rich in the reign of Nero, maintained medicine could be taught in six months. It is true he then proceeded to publish a treatise in eight volumes. Pliny inveighed against eternal changes in teaching and practice: "but withall they must marvel much, and thinke it a great indignitie, that no science and profession in the world hath had lesse soliditie in it and been more unconstant, yea, and how it daily changeth still."

With Galen, who gave us what may be termed the first voluminous system of Medicine, the period of the ancients came to a close. His teaching exercised profound influence upon the minds of men throughout the long period from the fall of Rome to the discovery of America. Probably, as Boerhaave held, it did more harm than good; until finally blasted by that explosive charlatan Paracelsus, soon after the dawn of the sixteenth century. But medicine was not wholly benighted during the medieval period. We all know something of Aetius, Alexander of Tralles and Paul of Egina. Not only was Aetius a surgeon and internist, but he removed tonsils and specialized in diseases of the eyes and teeth as well. Alexander of Tralles found it necessary even early in the seventh century to protest against unnecessary operations. He thought prophylaxis of disease the most important study for a doctor. We all know the high standing of Jewish and Arabian physicians in the Middle Ages, and still may read with interest writings of Rhazes and Avicenna. Through slow development in the early Christian era the school of Salerno reached its greatest dignity in the tenth, eleventh and twelfth centuries. Its students, from all over Europe, spent three years in premedical work in philosophy, four years in medicine and one year with a practitioner before entering their profession. Later schools at Bologna, Padua, Pisa, quickened with the spirit of the Italian renaissance, profoundly influenced discovery and teaching in medicine everywhere.

From the time of Vesalius, Servetus, Harvey and Morgagni to that of Pasteur, Lister, Koch and Virchow, clinicians were molded in a fashion that we can all appreciate. Sydenham and Boerhaave, Auenbrugger, Corvisart, Laennec, Louis, Heberden, Withering, Parry, Hunter, Jenner, Graves, Stokes, Corrigan, Bright, Addison, Gull, Schönlein, Wünderlich Skoda, Dupuytren, Trousseau, were nearly all of them practitioners with a bent for teaching and investigation. Their preliminary education was simple and had much in common, particularly a thorough drill in the clas-

sics. They were frequently teachers of the natural or medical sciences. Their interest in anatomy, physiology and pathology was none the less real because directed chiefly to the elucidation of problems of disease in man. If they went far as surgeons or specialists they still kept in plain view the broad medical field. Even in more modern times when wealth of discovery and increased specialization began to separate from the busy general practitioners a group of medical men in charge of university or medical school clinics or of consultation practice in their communities, these men entered upon this varied work with many views in common. They had under their feet the firm foundation of general pathology and general medicine. They had all seen disease in varied aspects, in various stages, under varied circumstances.

With the tremendous development of the natural sciences, the astounding transformations in medicine following the discoveries of Pasteur, Lister, Virchow and Koch, the phenomenal rise of surgery and surgical specialties, came also rapid changes in social conditions, a rush of men to the cities, growing impatience with lessons of the past, a profound faith in anything that was fin de siècle and new. Even against these forces clinicians for a time were able to stem their way and to keep fairly intact the broad field of medicine. They entered clinical medicine usually after a basic training in general pathology. They again had the advantage of a common starting point, of a knowledge of disease as a whole and in its varied aspects. If they became specialists in a particular field it was at a later date and with the teachings of general medicine well in mind. Their hospital material was not sacrificed to the demands of varied specialties and their students, early anchored to the clinic, had more opportunity to study disease, though less chance to develop technical methods. This training gave us clinicians like Traube, Charcot, Fournier, Gowers, Jonathan Hutchinson, Weir Mitchell, Fitz and Osler. Their ability to teach and to investigate was enhanced, not weakened, by their experience and success as practitioners.

Gradually in the past twenty years medical schools, hospitals, teachers and the profession have been remolded under pressure of new discoveries, new methods, new appliances, new specialties. They have been unduly influenced, moreover, by the craze of recent years for universal standardization, organization, regulation. Premature enthusiasm has at times been reflected in premature legislation until a very intricate specialized system of education has been elaborated not only in medical schools, but in universities and hospitals as well. At the same time intricate and far-reaching problems have been forced upon the practitioner.

Enthusiasm for results achieved by technical skill, by special concentration, by discoveries in laboratories, has lessened appreciation of the less showy work of the general practitioner and medical clinician. As Mackenzie says: "The faith and trust in laboratory methods renders the physician incapable of appreciating the value of methods peculiar to clinical medicine. In an attempt to be up to date physicians use the methods of these auxiliary branches, so that clinical medicine toils laboriously in their rear, and to a great extent becomes subservient to them." There are enthusiasts today who would dictate the very ways men must travel to reach success in practice or teaching, who would block all roads to advancement of the clinician in school or hospital, except those that lead through laboratories. Theirs is the impatience (to paraphrase Barker) with knowledge not expressed in equation or graph. It is high time to do away with such intolerance and fetishism. The clinician of today and tomorrow is being jammed into a complicated educational machine and forced, often against his will, into narrow specialism. For this, as Mackenzie writes: "To a great extent the physician is himself to blame. He has allowed himself to be dazzled by the inventions of his colleagues, and has accepted their methods and ideas, not recognizing the limited scope of all such methods, while his own vastly more important field has been neglected."

Results of surgical work and other special treatment in many instances have been overestimated by profession and public alike, and the need of technical appliances and highly trained specialists in private and hospital practice has been unduly emphasized. Medical discoveries have not only at times been overvalued, but they have been prematurely announced and embodied in legislation that later proved unwise. We have often promised too much too quickly, and now zealous specialists in medical education, State boards of examiners, and State boards of health, Federal authority and well meaning but often misguided public opinion are forcing medicine to deliver goods not yet produced. As Abraham Jacobi said: "The public . . . is unable to follow or correctly rate the results of unobtrusive and unornamental brain work." Yet it is the fashion for guileless individuals within the profession to discuss with the laymen all sorts of intimate problems and to publish for their consumption volumes of half-baked science and unfermented theory. Years ago that wise physician, Dr. J. M. DaCosta, in speaking of "excessive publication of half-knowledge, of doubtful fact and of loose inquiry," added the comforting reflection, "who knows that it is not, after all, a physiological function giving full play to brain centers in very rare use—centers situated in what Oliver Wendell Holmes has called the idiotic area of the brain."

How can we best preserve all that was good in the older methods of teaching and practice without sacrificing any essentials of the new? How will the clinician regain in the confusion his former broad field and solid foundation, how reassemble his scrambled material, how get back his patients scattered among a score of specialties, how restore his dominant prestige in profession and clientele? In my opinion the solution of many vexing problems lies in the simplification and unification of medicine. If our machinery—educational, professional, social and bureaucratic—has become too cumbersome and complicated, scrap and reassemble it. Early in their career give our students some common foundation, some general background so that

they will have more associations in common. Bring them a year or two earlier to the university with better knowledge of history and language (including their own) than they have now. In the university by all means let them study science, but let them browse in the field of humanities as well. If possible bring them to a medical school with close intercommunication of scientific and clinical departments. Do away with the fetish that they must laboriously acquire the technique of all laboratories before entering the clinical field. Put them at work in a hospital with few divisions, preferably only medicine, surgery and obstetrics, and with an outpatient an integral part of each clinic. Let them have teachers who see private patients of all ages and kinds. Try to offset forces in hospital organization and in legislation tending to scatter material of general medical and surgical clinics. Cut and simplify the medical curriculum by avoidance of needless repetition and by elimination of special teaching. By all means utilize specialists in teaching, but let them emphasize more plainly the foundation of each specialty upon general medicine. Wider range through all departments of the school and hospital may safely be permitted the student in the fifth year, and opportunities freely granted in later years for development in any field—not excluding general practice.

In a few years men should be sent out, perhaps with a smaller mass of technical knowledge, but with wider vision, better judgment, wiser, more tolerant, better able to observe, to think and to decide. They would be better clinicians, better clinical specialists. Meanwhile let the profession be distrustful of too much regulation from within or without. Let us clear medicine of false glamor and bunk, get a juster appreciation of results, and get more common sense into practice and into the public mind. We have made tremendous advances in twenty years, but we have still a lot to learn. Recent experiences with pneumonia, influenza and encephalitis should make us all duly humble and appreciative of our therapeutic limitations. Despite the tremendous amount of laboratory work of recent years we know little more about nephritis than taught us by Bright. We have spent a lot of money on sanitariums for tuberculosis without adequate return. We have overrated in the professional and public mind the results obtained by arsphenamin and discredited wholly without reason the use of mercury and iodid in the treatment of syphilis. We are constantly rediscovering facts well known to older clinicians—witness the recent enthusiasm for yeast, codliver oil and lemon juice. The clouds are lifting a little, however. We are becoming a bit doubtful that end results of surgery are always fine. There is fortunately a growing feeling that clinical judgment is an essential in medical education as well as training in fundamental sciences and laboratory technique. The intolerance of the purely laboratory man or the early specialist for all other branches of medicine will probably not last long. More knowledge of the valuable teaching of the past may lead to saner progress in the future.

In practice we can probably do without an awful lot of machinery, and an awful lot of social workers, and special nurses and physchoanalysists. We need not send nearly the number of patients into hospitals that we now do. We need not subject nearly so many to operations. We need not overemphasize the value of intravenous and vaccine therapy that requires too frequent office visits. We may safely lay stress upon the value of time in diagnosis and treatment and not be rushed off our feet by enthusiasts in and outside the profession to try methods only because they are new and for the sake of doing something. Let us be sure that ultra scientific medicine is truly *wise* medicine before putting it into practice, and let us be a little wary of milleniums and panaceas. Let us get better acquainted with our patients before passing them over to groups of supermen to be analyzed and organized and specialized and finally integrated and perhaps treated. Let us realize that they, the patients, have some rights and often little money—that they have parts not all described in the anatomies which are often strangely moved by forces outside the ductless glands. Let us keep our feet firmly planted on the good firm old ground of general medicine, and it will not matter so much if our heads are sometimes in the clouds.

Even clinicians are not without the usual failings and foolishness of ordinary men, and will at times do fool things. We doctors, all, however, have certain redeeming qualities: traditions, ideals and a fair desire for work. We should pray for a somewhat wider, saner outlook into the rather dubious future. We need have no petty jealousies in the profession. We are in the end all workers in one field and should be proud of individual achievement in however remote a part of it. The words of Plato should still ring true—"There is *one* Science of Medicine which is concerned with the inspection of health equally in all times, present, past and future."

Fad of Replacing the Uterus—The multitude of pessaries, intra-uterine and vaginal, which marked the displacement era of sixty years ago, have almost all disappeared into museums as antiquities or curiosities, and now the ring is almost the only survivor. In the surgical area through which we are now passing, the modern counterpart of the pessary inventor is the deviser of suspensory and sling operations on the uterus. The woman with a uterus that will not sit up straight can have a tuck taken in its round ligaments, or have it held up by the ligaments being stitched to the abdominal wall, or delicately supported by the ligaments being clasped behind its back, and so on ad infinitum. The attitude of mind of these suspenders of the uterus is precisely that of the mid-Victorian pessary-monger; their methods only have changed with the times, and these operations are quite as much overdone as the pessaries were, but do less harm. There is not the bad mental effect of continuous pessary wearing with the recurrent need for changing, and there is the advantage that the patient has two or three weeks in bed with a change and convalescence, together with the strong suggestion that now the errant womb has been made right, she also ought to be right.—J. S. Fairbairn, Brit. M. J., 1:587 (April) 1922.

FUNDAMENTAL FACTORS IN THE ETIOLOGY AND TREATMENT OF CHRONIC INTESTINAL DISEASES *

By HUGH F. FREIDELL, M. D., Santa Barbara, Calif.

This paper is a discussion of those very prevalent deranged gastro-intestinal conditions which are characterized by either hyper or hypo-peristalsis and which are functional in nature.

In the hyper-peristaltic type is found the hypersensitive and irritated intestine and colon with spasms, diarrhea, spastic colitis and mucous colitis. This results in undernourishment and varying degrees of intestinal distress. In the hypo-peristaltic type is found the slow sluggish intestine and colon with resultant stasis, fermentation or putrefaction, constipation and distension.

Patients of these classes appear before us every day and they have been very aptly dubbed "The Chronic Intestinal Invalids."

The most common causative factors in both the hypo and hyper-peristaltic types are the widespread use of intestinal irritants, such as laxatives, cathartics, purgatives, and such irritating enemas as "glycerine," "soap-suds," "one-two-three and two-four-six," "turpentine," and others so much used in post-operative cases, as well as the large water enemas or flushings constituting the so-called "Internal bath."

The use of these harmful irritants is seemingly indicated at times, due to the markedly unbalanced diet upon which the average individual exists. Ample literature in medical journals, textbooks, public press and commercial advertisements make it easy for the physician to prescribe cathartics or enemas for the relief of intestinal conditions without carefully considering etiology and without carefully considering the end result of advising the patient to start, or to continue if already started, the cathartic or enema habit.

It is common to note in the histories of patients with intestinal disease and distress of various kinds, that the trouble dates from the time they were operated on for this or that condition. Upon careful questioning, it is brought out that although they had never used cathartics or enemas before the operation, such was instituted at the hospital during their convalescence and was continued after their discharge. Some surgeons are prone to leave the handling of the intestinal function to the care of the nurse in charge. The peddling of pills and routine giving of irritating enemas take place in some of the best hospitals. The patient leaves the hospital on such a regime and, of course, follows it out at home.

Treatment of these diseases should be based upon a working understanding of the physiology of the gastro-intestinal tract and should consist in efforts to restore the normal state to the definitely abnormal intestine. Material enters the small intestine in a liquid to a semi-liquid state. It is pushed through the small intestine by the longitudinal peristaltic movements. As it progresses it is divided, and thoroughly mixed with the intestinal juices and brought into intimate contact with the absorptive surfaces by the segmenting and circular contractions of the muscle walls. Most of the nourishment is absorbed from the small intestine. The material that enters the large intestine is composed chiefly of water, indigestible debris, bacteria, salts, a few starches and organic acids. It is brought into intimate contact with the absorptive surfaces of the colon, in a similar manner as in the small intestine, except that anti-peristalsis in the cæcum and ascending colon inhibits the movement of the material. Due to the absorption of water, salts and occasional starches, as the material progresses through the colon it becomes less fluid and in the sigmoid it is quite pasty. The material remains in the rectum until enough of the remaining fluid is absorbed to give the stool a consistency hard enough to stimulate the rectal nerves for a desire for defecation.

The intestinal movements are produced mechanically by the bulk of material and chemically by reflex action through the sympathetic, motor and vagatonic nervous system.

Within certain limits there is a normal time for the passage of material through the gastro-intestinal tract. The radiologists, using a barium suspension, consider there is no retention in the stomach if the meal is out in six hours, in the small intestine in from twelve to sixteen hours, and in the large in from thirty-six to forty-eight hours after ingestion. Naturally a foreign, rather non-absorbable, material, such as the barium solution is not the ideal means of testing the gastro-intestinal function. Food should be used. This is easily done by feeding a charcoal tablet with the meal and timing the appearance of the black stool. This has been repeatedly done in normal individuals and the stool appears in from thirty-six to forty-eight hours.

This normal mechanism is maintained by a properly balanced diet. A properly balanced diet is one that nourishes, as evidenced by the maintaining of the normal body weight, and one that contains enough of the irritating material to produce a normal stool every day, without intestinal distress and without artificial aid.

This normal metchanism is of the utmost importance and should be constantly in mind when attempting to treat these intestinal conditions. One of the most important factors is the time it should take for the material to pass through the gastro-intestinal tract. Food should not be rushed through the stomach before it has entered into solution with the gastric juices. The material should not rush through the small intestine before sufficient time has elapsed for the nourishment to be absorbed and if it is rushed through the large colon, the body will be depleted, more or less, of necessary fluid, a common finding in diarrheas of even short duration. Any factors that disturb this mechanism, the most common of which are artificial stimulants, cathartics and enemas, will cause these absorption times to be disarranged and if kept up day after day, will result in chronic intestinal disease.

In the treatment of the hyper-peristaltic type

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cathartics and large enemas should never be used, except in the very aged and then only after unsuccessful attempts without artificial aid.

A preliminary rest of the small intestine and colon should be instituted. This is obtained by physical, mental and metabolic rest of the patient combined with proper soothing medication. Daily evacuations of the bowels should be assured in order to establish the normal habit and prevent fecal impaction in the rectum.

Mental rest is important because many of these patients are intensely neurotic. It is best obtained by taking the patient into your confidence, explaining to him fully and simply the normal mechanism of the intestine, pointing out to him his errors in his own management and explaining just how you expect to get the intestinal function back to normal. It will take a good deal of assurance to obtain and to retain the patient's confidence in your ability, as the line of treatment is so opposite to the general point of view. It is difficult at times to make the patient appreciate that he will have bowel movements without cathartics, especially when he has used cathartics and enemas for years. However, if the patient is intelligent he will usually give you a fair trial and when he begins to have stools without distress and artificial aid, his gratefulness is very pleasing. He must have a good working knowledge of the form of treatment so that he can intelligently continue it after his discharge from the hospital.

Physical and mental rest, obtained by keeping the patient in bed for a week or ten days, is necessary because exercise stimulates the intestinal peristalsis.

An easily assimilable diet and one non-irritating to the intestines containing a minimum amount of indigestible debris and irritating material, is essential. Heat should be applied to the abdomen during the major portion of the day by the judicious use of an electric pad. This soothes the hypersensitive nerve endings and the inflamed mucous membranes of the intestine and quiets the intestinal peristalsis. Soothing medication in the form of bismuth and chalk powders is useful.

Daily evacuations are assured by enemas of two or three ounces of warm olive or cotton-seed oil, given at night and retained until morning if possible, without distress. This lubricates the rectum, softens fecal material and does not enter the colon itself. These enemas are soothing, they form the morning habit or cause it to continue if already formed, and they prevent fecal impaction. These enemas are stopped as soon as the diet is complete enough to cause stools to appear normally. Normal stools should be the rule before patients are discharged from the hospital.

During the treatment everything possible is done to rest the intestine and colon, so that they will have every opportunity to regain their normal tone and reaction to stimuli. During this period patients will have stools with the aid of oil enemas. These stools come from the material ingested before treatment is instituted and after that from the intestinal secretions, bacteria and bismuth and chalk powders. The bismuth and chalk powders usually contain 10 grains each of bismuth subnitrate, calcium phosphate, and calcium carbonate and should be dissolved in water and taken five times a day, after feedings. The powders are soothing to the inflamed mucous membranes, form a coating over the sensitive nerve endings, rendering them less susceptible to stimuli and provide for a non-irritating bulk. The oil retention will prevent fecal impaction in the rectum.

After three or four days of non-irritating regime, the diet is gradually increased, from the non-irritating to the irritating food, adding food of the least irritating nature first.

The diet in the beginning consists of cereal gruels made of farina, barley, oatmeal flour and rice, strained, made thin with water and served hot five times a day. On the second day boiled milk is usually substituted for two or three of the gruels; on the third day soft cooked eggs with toasted crackers may be added; then gradually day by day, add food such as cereals, with cream and sugar as desired; tender bits of well-cooked meat and game, custards, toast, cocoa, tea or weak coffee. Up to this stage the food is practically all absorbed as nourishment and is non-irritating in nature. This phase of the treatment is usually completed in a week or ten days. Then if distress is absent and stools are formed, the more irritating foods, such as rice, oatmeal, baked, mashed or boiled potatoes, vegetables and finally cooked fruits are added. The indications for adding more of the irritating and bulky food are absence of intestinal distress and constipated stools. Additions to diet are stopped or even lowered somewhat whenever distress or loose stools appear. In this manner each patient is tested as to tolerance for the irritating foods and when discharged should be on a well-balanced diet which contains enough of the bulky and irritating material to produce a daily normal stool without distress and without artificial aid.

Each patient requires individual consideration and minor changes are made in the treatment as thought proper. In cases of achylia such food as meat and eggs are omitted, hydro-chloric acid is given and the intestinal powders given at such a time that they will not destroy the beneficial action of the acid. In some case of spastic colitis, the spasm is at times more easily relaxed by small doses of tincture of belladona three times daily for periods of ten days. Occasionally it is necessary to give tannic acid or opium in severe cases of diarrhea.

In some mild cases it is not necessary to institute bed rest in the initial stage of treatment. By giving the foregoing outlined diet and the intestinal powders and by a judicious use of the oil retention enemas good results are obtained with the patient up and even working at his usual occupation. However, in the majority of cases, the results are better and more quickly obtained if the initial period of hospital or home care is instituted.

In cases of the so-called "atony of the intestine," the hypo-peristaltic type, the above regime is as efficacious as in the cases of hyper-peristalsis. It is interesting to note that a careful study of many cases of the atonic or hypo-peristaltic intestine shows they have unquestionably passed through the stages of hyper-peristalsis or hypersensitive intestines and colons.

Where we have reason to suspect that part of the intestinal condition is due to an inability of the patient to properly digest carbohydrates, better results are obtained by limiting but not entirely excluding the carbohydrate intake.

Too much attention should not be placed on the slight amounts of excess mucus, fat, starch and undigested meat fibers that are so often found in the stools. It is to be expected that in a hyperperistaltic intestine and colon where the nerve endings are in a hypersensitive condition that an excess of mucus will be poured out, and when the material goes too rapidly through the intestine excesses of fat, starch and undigested meat fibers will be present. In constipation where the stools are hard there is always an excess of mucus poured out in the attempt to coat these masses and to enable them to be expelled more easily. The real cause, the disordered intestinal mechanism, should be treated, not the symptoms. Allow the normal mechanism of the intestines and colon to return and these excesses will disappear from the stools. In a similar way the bacterial flora will be improved.

Ultimate recovery is assured in these patients. They leave the hospital well nourished, free from intestinal distress and having normal stools daily without artificial aid. They are educated in the normal way in which to live and are taught to regulate the amount of bulk and irritating material in the diet, using the consistency of the stools and the absence of intestinal distress as indications for varying the amount of bulky and irritating items of diet. Patients are seldom in the hospital over three weeks and often only ten days to two weeks.

In conclusion I would place emphasis on the following:

There is a small field, if any, for the therapeutic use of artificial stimulants in the treatment of chronic intestinal disease.

The abnormal intestinal function should be recognized and aided to again become normal.

The best method is to combine physical, mental and metabolic rest with soothing treatment, allowing the intestine to regain its normal tone and reaction.

Surgeons should be more cautious in the use of artificial intestinal stimulants in the post-operative care of patients. They should insist that the normal intestinal function be re-established if it has been disturbed before allowing the patient to leave the hospital.

The general public should be better instructed as to the management of their intestinal conditions.

(Santa Barbara Clinic.)

GROUP MEDICINE—A DISCUSSION OF ITS VALUE TO THE PROFESSION AND THE PUBLIC

By DONALD J. FRICK, M. D., Los Angeles.

In the last twenty years through the advancement of knowledge by the professions and the appreciation of this by the public, it has become necessary to specialize to get the highest efficiency. In law it would be hard to find a man willing to attempt to carry a client through a criminal action, draw up articles of incorporation for a big company, pass on a bond issue and draw up a will. If you did find a man willing, you would not trust him, for you would know that he could not possibly possess the information and technique to cope successfully with all these problems. Engineering long ago developed its specialists in mining, electricity, hydraulics, construction, chemistry, etc. We take our problem to the appropriate place without question, knowing that general engineering is an impossibility. The other learned professions have kept pace of a necessity.

Medicine has had specialists in certain branches for a number of years, but only in the last few years has the human body been divided up into small sections and allocated to the different members of our profession. This is a necessity, for the capacity of one man's brain and time are unfortunately limited. With specializing in medicine have come grave problems which must in some way be solved. The correlation of the organs in the body does not allow of independent action by the different specialists without due regard to pathological conditions outside their own fields of action. The specialist cannot be a specialist and a general practitioner, so there can be no way for him to judge of conditions outside his own field except from the reports of other specialists. Unless there is organization among specialists, efficiency and time are lost to the patient and to the profession.

Keeping in mind these facts we must realize that group medicine of one type or another is a necessity. This is the reason that this subject has been under constant discussion wherever medical men have met.

Leaders in medicine, Drs. William Mayo, Billings, Barker, and others, have presented the different angles of the subject with such wisdom that a great deal that has to be said here must of necessity sound familiar and hackneyed.

Different types of groups are being worked out with more or less success. We will briefly discuss the principal types and their advantages and disadvantages.

1. Groups made up of physicians and surgeons with all the allied specialties, having common interests medically and financially.
   - (a) Built around an outstanding man.
   - (b) Built up by the association of a number of good men in a community who have succeeded in their own lines.
   - (c) Built around a college or hospital.

2, Groups who limit their work to surgery.
3. Groups who limit their work to internal medicine.
4. Diagnostic groups whose members function together for the purpose of diagnosis only.

VALUE TO THE PROFESSION

Theoretically and practically we shall have to concede that each of these types of groups is, from an educational standpoint, advantageous to the physician who is a member of the group. He cannot help being broadened by constant contact with other men, who, in a wholesome way, offer criticism upon his work.

Which of the above plans offers the most to the profession?

(1a)—The general clinic built around one man has outstanding advantages for those who are to follow the leader's bent. A great surgeon will inspire everyone about him to do the best in surgery while with him, and the fire of his genius will for all time burn in the hearts of his students. But medicine in all its branches can only take a mean position in such environment. Murphy was a maker of surgeons; Osler a maker of physicians.

(1b)—A clinic made up of a number of successful men is a great help to everyone in it, if histories are well taken, discussion of cases and results are systematically carried out, and each man gives his best to it. Unfortunately, it cannot rise above the mean between the best and poorest individual in the group. The weak man will be definitely helped, but genius will have a difficult time thriving.

(1c)—A clinic built about a college and hospital is of all types of groups the most beneficial for the profession and the members of the group. Working in a free clinic and teaching students afford the best training both for the mind and the soul. A man who cares for numbers of people with only one type of reward, the addition to his store of knowledge, grows fast and in a healthy manner. Teaching students, nurses, and physicians fixes facts in his mind and makes him careful of the source of his knowledge as nothing else does.

The financial returns from any of these types of clinics can be made adequate for all needs. Riches should neither be expected nor desired in a profession.

(2 and 3)—Medical and surgical groups are useful because they afford the members opportunity to consult with each other, to divide the expenses of a modern plant, to live and breathe like human beings rather than to be constantly on call with no respite from duty. Because if a man is a true physician, he will not undertake a case except with the belief that it is his duty to provide proper attention at all times. A group does that in the best way. Individual attention is not necessarily an advantage.

(4)—Diagnostic groups have doubtful value to the physicians who compose them. The patient goes through the mill and is sent back to his physician. The diagnosis may be correct or not. In most cases no one will ever know. The procedure is unsatisfactory and oftentimes unscientific.

VALUE TO MEDICINE

Will group medicine advance the science of medicine? Commercial group medicine can do this only along certain lines, namely, in compiling statistics from series of cases. These statistics will retard or help progress depending upon their foundation and accuracy. Careful recording of symptoms and signs in the past and present history with all the clinical data gained from the many possible means of modern diagnosis and treatment must advance our knowledge of disease. But the process has its limitations due to the necessary routine, the hurry and bustle which do not allow time for restful, constructive thought. The group in a college or endowed hospital allows periods of rest. These give the individuals time to correlate their thoughts before imparting their knowledge to others. Competition is keen in every department. Honor comes to him who advances his services above the others by the application of constructive thinking along a certain line. Medical discoveries have, as a rule, come from men who were able to concentrate along one line without being hampered by the details of routine and money-making.

VALUE TO THE PATIENT

Does group medicine offer definite advantages to the patient? It cannot be denied that all of the types are of marked value to the patient. No one can possibly specialize in all branches or become skilled in all of them. A well-balanced clinic should be able to pass a patient from one department to another rapidly, and discuss all his abnormalities. Because of bulk of work done, the best of equipment for all purposes would be available. Expert technicians in all departments under medical heads could be procured. The patient's comfort, time and pocketbook could be conserved by appropriate organization. The proper correlation and evaluation of all the facts established regarding the patient's condition, and a just decision as to treatment indicated, must be rendered by a wise and experienced head if the maximum benefit is to accrue to the patient. In our opinion, a leader of more than ordinary ability is needed in every group if the patient is to derive the greatest value from the study of his case. A patient may travel from one specialist to another in any city of moderate size and have some abnormality corrected at every stopping place, and finally come to the end of his journey little better than he was in the beginning. In the same way he may be carried through a group and the obvious abnormalities be removed, but he may be no nearer cured of his complaint than he was in the beginning, unless diagnosis and treatment are brought into unity.

Lay diagnosis has become an established custom. Dr. S. makes a careful study of Mrs. G., who has asthma. He goes over every organ, does all the foreign protein tests, the pollens, the foods, the bacteria, and finds all of them negative. He

has radiographs made of her sinuses, finds a chronic maxillary sinusitis, and is able to express pus from her tonsils. By elimination he decides that the sinusitis and chronic tonsilitis are responsible for Mrs. G.'s asthma. She is sent to a specialist, who removes her tonsils and drains her sinuses, and her asthma is cured. Mrs. G. goes along through life happily, and every asthmatic she sees she sends to a specialist for tonsillectomy and sinus drainage. In the opinion of the average specialist, not all by any means, a diseased organ that comes in his special line must come out. So Mrs. G.'s asthmatic friends usually find a willing specialist who relieves them of part of their anatomy. Occasionally one will be cured, but the seasonal asthmatic, the food-sensitive asthmatic, the cat or dog-hair asthmatic is not helped in the least, but is likely to lose faith in medicine because medical procedures in her case were not scientific.

This is not a criticism of ear, nose and throat men. It is a criticism of isolation of specialists and the treatment of organs instead of the patient. Group medicine will go a long way toward curing this situation, but it would seem wise before any procedure in a clinic is undertaken, that someone more or less versed in all phases of medicine go over the findings and decide the relative value to the patient of all remedial measures contemplated. Routine histories, physical examination, laboratory and X-ray examinations, will, of course, help guide us in solving the perplexing question of what should be done.

All three groups of the first type will be of use in eliminating the evil of isolated treatment. The last group, that connected with teaching, will do its work best, because those who teach must tell why a patient comes into the clinic and why a given procedure should benefit him. In this connection it seems possible that any group may be a teaching group if it will use the nurses in the hospital as proper students.

Medical groups and surgical groups may help distinctly if they have strength of character enough to send from their groups patients who need attention that they cannot give. Medical groups are, as a rule, dominated by diagnosticians who should have enough special help to find abnormalities. With the facts at hand, such a group can send patients to definite specialists for treatment, which, in the nature of things, should be curative or palliative for that patient. Surgical groups with the proper surgical diagnosticians can perform wonderful and lasting benefit if they will limit their sphere to constructive surgery.

DISADVANTAGES TO PATIENTS

We have discussed the advantages of group practice to the patient. Are there disadvantages? There are definite drawbacks to any of the present plans. If all physicians were molded into groups, patients would only have the choice of a group and not of a man. To be useful to a patient a group should study him thoroughly on his first appearance and then carry him along through any and all subsequent illnesses, adding to his history at his every appearance. If this were systematically done a patient would have immediate scientific care in any emergency. To make this efficient, however, he should not have his appendix removed by Dr. R. of Group A, his tonsils removed by Dr. S. of Group B, and end his surgical career by going to Dr. T. of Group C. for a prostatectomy. Drs. R., S., and T., may be the best men in their lines, but by going from one group to another he loses the efficiency gained by staying with one. Patients, however, as a rule, want the best. Group medicine of type 1 would keep them from having that at times.

The personal element in medicine would be largely eliminated. Many patients need boosting and stimulation to get well. Perplexing problems at home must be solved, and often it is only by sweeping away these worries that we may start a patient on the road to recovery.

The cost of a thorough examination by a group is proposed by some as one of the disadvantages of group practice. If any one of you will sit down and go over with one of your chronics the amount of money he has spent on different drugs and cults before even an attempt at diagnosis of his case has been made, you will realize that he ought to be willing to pay for a definite diagnosis with proper instructions for getting well. Cost can be so regulated that it will not be prohibitive to anyone.

Groups cannot take the place of the old family physician, but no man alone can do this today. In days gone by the family physician could embrace practically all of human medical knowledge and not stagger under the load. Anyone nowadays who tries to do so becomes a sorry mediocre misfit. Therefore, it has come to pass that the physician with a family practice performs all the hard work and loses the lucrative work to the specialist. The result is that only a few remain competent and clear-headed under such abuse. For one family to rely upon a single medical advisor is ideal, but not practicable.

What effect have groups on the profession at large? Groups of the 1a type (built around an outstanding man) and 1b type (made up of outstanding men in the community) become, as a rule, bones of contention if located in a city of any size. Because they are doing all kinds of work, they continually step on the toes of individual doctors. They do not refer work, so work is not referred to them. The family physician feels it most, as groups can carry families as a whole. On the other hand, type 1c, connected with a teaching hospital, is a great impetus to every doctor in the community because it holds out to him the opportunity to increase his own medical efficiency. New facts are constantly brought to the attention of those living near a group that is doing constructive work. The profession will respect the man who is giving his time to the advancement of the art of healing, and will bear him no malice.

We cannot help feeling that every section of this country would be made better by the influence of a group of medical men constructed about

a teaching, endowed hospital. Unfortunately, every community cannot be provided with such advantages, and the solution for the less fortunate communities lies in the construction of groups which will serve as well as possible the needs of its territory. Cities should strive to provide teaching hospitals. Country districts may well have groups working about a standardized hospital, the older experienced men doing the hospital work, the younger men for their first five years at least, making the outside calls and night drives, and caring for the emergencies. After these men have served their apprenticeship they may begin the study of a specialty with some basis and assurance of being really useful. The older men would be relieved of the drudgery and the science of medicine would advance decidedly in service and the respect of the people.

A liberal policy must be adopted. Sick people require better, more efficient care. Physicians need every possible means to keep abreast of the progress of medicine. Group medicine is a step forward in reaching these goals.

THE PATHOLOGY AND BACTERIOLOGY OF EXCISED TONSILS AND THE EFFECT OF X-RAY THERAPY UPON THE BACTERIAL FLORA OF TONSILS.*

By FRANKLIN R. NUZUM, M. D., Santa Barbara, Cal.

Following the report of Murphy, Witherbee and their co-workers on the effect of small doses of X-rays on hypertrophied tonsils and other lymphoid structures of the naso-pharynx much consideration has been given to this subject. A subsequent paper by Witherbee states that all of five hundred patients treated, not alone for hypertrophied tonsils, but for chronic infected tonsils, were so benefited that surgical removal was not necessary. This and similar reports have led to a debate between Roentgen therapists and nose and throat men as to the merits of X-ray therapy in tonsillar conditions.

Since the question is one of importance it seemed that a careful study of the subject by persons impartially interested in both the X-ray and the surgical side of the question would be a logical procedure in arriving at a fair conclusion.

With this in view we have undertaken a correlated study of the symptomatology of 218 patients upon whom tonsillectomy had been done and of the pathology and bacteriology of the excised tonsils. A study was then made of a smaller group of patients whose tonsils had been treated by X-ray. In this group the gross appearance of the tonsils, their change in size, and the bacterial flora before, during, and after treatment were recorded.

In recording the pathology of chronic tonsillar infections the plan of J. J. Moore has been used. He recognizes the following three pathological divisions of tonsillitis: Type 1. Chronic lacunar tonsillitis, the changes occurring in the epithelial lining of the crypts. Type 2. Chronic interstitial tonsillitis, characterized by a connective tissue increase of the stroma in the parenchyma of the organ. This type includes both atrophic fibrous tonsils and hypertrophic tonsils. In the latter, in addition to an increased stroma, there is also an increase in the number and size of the follicles, encroaching on lymphoid tissue. Type 3. Chronic peri-tonsillitis, characterized by an increase of the fibrous tissue capsule and peritonsillar tissue.

The relation between foci of infection and systemic disease has been widely recognized. The frequence and importance of streptococci as the predominant organism in such foci has likewise been emphasized. In bacteriological studies of infected tonsils, streptococci, and especially hemolytic streptococci, have assumed more prominence than other organisms.

In our study we have used the bacteriological technique advocated by J. H. Brown. Both streaked blood agar plates and poured blood agar plates were used. Single colonies were fished from these plates and transplanted on blood agar slants. Bile solubility and the use of various sugar media were employed in making a final classification of various colonies.

We have used Brown's plan of classifying streptococci. This places all streptococci into four groups, depending upon their manner of growth in blood agar plates. Alpha hemolytic streptococci are characterized by a small zone of brown or green discoloration immediately about the colony. Alpha prime hemolytic streptococci have immediately about the colony a small area of incompletely haemolized red blood cells. Beyond this is a ring of complete hemolysis. Beta haemolytic streptococci is that group which has a zone of complete haemolysis immediately about the colony. This clear zone varies from 1 to 4 mm. in width. The fourth, or final, division of streptococci are the non-haemolytic colonies. They appear as small, dark dots and produce no gross change in the adjacent blood corpuscles of the media.

There is a wide discrepancy in the frequency with which haemolytic streptococci have been reported by previous workers. A large group have reported them as present in 45 to 50 per cent of all tonsils. A small group have found them in 90 to 97 per cent. We have used both streaked and poured plates. A sterile swab was drawn across the surface of one tonsil. It was then dipped into 1 cc. of sterile physiologic salt solution. A platinum loop bent at a right angle near its distal end was then introduced into a crypt withdrawn, and dipped into a second tube containing 1 cc. of sterile physiologic salt solution. A few drops of each of these innoculated solutions were then poured into petri dishes and 12 cc. of liquid blood agar added. The petri dishes were gently agitated until the salt solution had become well mixed with the blood agar and put aside to cool, after which they were incubated for forty-eight hours. Streaked blood agar plates were made from the same material and incubated.

* From the Clinic of the Santa Barbara Cottage Hospital.

The plates were read at the end of 24 and 48 hours, and further work was done, as previously indicated in identifying the individual colonies of organisms.

Table I gives a comparison of the findings as between streaked and poured plates. From this it is apparent that in streaked plates rapidly growing organisms, such as staphlococci, prevent the recognition of other organisms, especially haemolytic streptococci and pneumococci. Further, the type of haemolysis can be more satisfactorily determined in poured plates. Ring formation, which occasionally occurs in Alpha type haemolytic streptococci following repeated incubation and ice-box refrigeration, was seldom detected in streaked plates, whereas it was present in 5 per cent of the cultures in which Alpha organisms occurred and poured plates were used.

TABLE I

	Streaked Plate %	Poured Plate %
Haemolytic streptococci, all types	45	96.1
Non-haemolytic streptococci	3.5	2.6
Staphylococci	64	37
Pneumococci	18	40.8
Bacilli	7	1.9

We found haemolytic streptococci in 96.1 per cent of the tonsils cultured. This is in accord with recent publications; among others, one by D. J. Davis, who reported them in 97 per cent of all tonsils, and one by Pilot and Pearlman, who found them in 95 per cent of excised tonsils. A majority of the writers who have reported haemolytic streptococci as present in 35 to 50 per cent of tonsils, used the streaked plate method, and in the light of our work this explains the discrepancy.

The clinical reason for removing the tonsils in our group of patients and the type of organism found on culture following removal are given in Table II.

TABLE II

	Alpha %	Alpha Prime %	Beta %	All Types Haem Strep. %	Gamma %	Bacilli %	Staphylococci and other organisms %
Tonsillitis	5	2.5	76	83.5	1.5	5	10
Mouth Breathing	11	..	81	92	..	8	..
Frequent Colds	8	10	61	79	..	10	11
Otitis Media	..	..	100	100	..	..	..
Rheumatism	18.5	..	54.6	73.1	9	9	9
Pathological tonsils	8.5	2.5	74.5	85.5	2.1	6.4	6
Normal tonsils	14	..	14	28	..	14	58

Haemolytic streptococci as the predominating organism were found in from 73 to 100 per cent of the tonsils removed for the various indicated reasons. In acute tonsillitis they were the causative organism in 83.5 per cent. In patients with rheumatism who were judged to have infected tonsils Beta haemolytic streptococci were present in 54.6 per cent and Alpha haemolytic streptococci were present in 18.5 per cent. Alpha haemolytic streptococci are more commonly known as streptococci viridans; they were found more frequently in the group of tonsils of patients with rheumatism than in any other. Of the entire group of tonsils which, after microscopic study, were judged to be pathologic, 85.5 per cent had, as the predominating organisms, haemolytic streptococci. Of the 15 tonsils in this group of 218, which on microscopic study gave no evidence of pathology, haemolytic streptococci were found in but 28 per cent and staphylococci and other organisms in 72 per cent.

Of the three groups of haemolytic streptococci the Beta, that group surrounded by a zone of complete haemolysis, is found much more frequently than Alpha or Alpha prime colonies. The area of haemolysis about the Beta colonies was designated as of wide zone when the width of the zone measured 4 mm. Frequently the zone measured 1 to 2 mm. in width, and these were designated as narrow zone. This width of zone seemed to be fairly constant and an effort was made to demonstrate further differences between them. The fermentations of various sugars resulted, as shown in Table III.

TABLE III

	Saccharine	Lactose	Raffinose	Salicin	Mannite	Inulin
Wide Zone	+	+	0	+	0	0
Nar'w Zone	+	+	0	+	0	0

Both types were virulent when injected into rabbits. When repeatedly subcultured the narrow zone group was found to become a wide zone type and vice versa. For these various reasons it was assumed that the amount of haemolysis depends upon the amount of streptolysin produced and that there is no further difference between these Beta colonies.

Table IV reviews the pathology of the excised tonsils, using Moore's classification. Changes were most frequently found about the crypts and occurred in patients who gave a history of attacks of tonsillitis. Chronic interstitial tonsils were present in 21 per cent of all of the tonsils examined. Of the group of patients who had complained of rheumatism, 66 per cent had pathologic changes in their tonsils of this type. Chronic peritonsillitis was present in 8 per cent of all tonsils examined and occurred most frequently in the tonsils of patients who had had rheumatism.

TABLE IV

	%
Chronic lacunar tonsillitis	42
Chronic interstitial tonsillitis	21
Chronic peri-tonsillitis	8
Abscesses	10
Lymphatic hyperplasia (as only change)	14
Mucous glands in capsule	7
Cartilage in capsule	3

The second group of patients in our study were said clinically to have hypertrophied or infected tonsils. They were given X-ray therapy. The technic as suggested by Witherbee was used. Since only 32 patients have received this method of therapy it would be unjust to draw definite conclusions. In the original report of Witherbee 40 patients were treated. Cultures from the crypts of these tonsils demonstrated haemolytic streptococci in each instance. The type of haemolytic streptococci was not stated. Following the X-ray therapy the tonsils became smaller and haemolytic streptococci were found in but four of the entire series. A second series of 500 patients reported later by the same writer leads one to believe that as a result of the shrinkage of the lymphoid tissue in the tonsils the crypts became everted, emptied themselves, and the patient was rid of his ton-

sillar infection. This work was not checked bacteriologically.

In this series of thirty-two patients cultures were made at the time of each treatment and at an interval following the final exposure. From four to twelve treatments were given each patient. In 16 per cent large hypertrophied tonsils shrank to a very small size. The crypts drained completely. The tonsil had a plain, smooth surface. Cultures from these tonsils were negative for all types of haemolytic streptococci. Thirty-four per cent of the remaining tonsils did not alter materially in size or gross appearance, but cultures from the surface and crypts became negative for all types of haemolytic streptococci and remained so. The remaining 50 per cent were not altered grossly and haemolytic streptococci of the Alpha and Beta types persisted in cultures made from surface and crypt.

A much larger series should be studied in the manner outlined before final conclusions are justified. But insofar as we have carried out this work the tonsil has not been rid of its latent infection, as represented by haemolytic streptococci, in anywhere near the proportion of instances that other reports in the literature indicate.

CONCLUSIONS.

Seven per cent of 218 pairs of tonsils removed presented no microscopic evidence of disease.

Ninety-six and one-tenth per cent of this group of 218 tonsils harbored haemolytic streptococci.

Of the three groups of haemolytic streptococci, Alpha, Alpha prime and Beta, the latter were found much more frequently.

There seemed to be a relation between the pathology of the excised tonsil and the type of organism it harbored.

Poured plates were found much more satisfactory than streaked plates.

X-ray therapy was effective in reducing the size of tonsils in but 16 per cent of this series.

Haemolytic streptococci, the essential organisms in chronically infected tonsils, were permanently removed in but 50 per cent of the patients treated.

Safe Hypnosis—When the physician finds it necessary to prescribe a hypnotic, two questions occur to him: Is it safe? Will it induce a drug habit? If safe, it will put the patient to sleep without risk of immediate or subsequent reaction involving pain or injury of any kind. If non-habit-forming it may be administered as often as the condition of the patient requires, or discontinued at any time without any more inconvenience to the patient than if it had never been taken.

These conditions are said to be perfectly fulfilled in Chloretone, a Parke, Davis & Co. product, which acts upon the dentritic processes in the brain, relaxing them so that both sensory and motor impulses are inhibited. This effect disappears gradually without, apparently, any more alteration in the functions of the nerve filaments than that which follows the sleep of ordinary fatigue.

Chloretone is given for its hypnotic effect in a dose of 5 grains, to be repeated, if necessary, in half an hour, and at this interval, in exceptional cases, up to 20 or 25 grains. It is indicated in the insomnia of excitement, in sthenic cases only.

THE MODERN HOSPITAL ON THE PACIFIC COAST *

By J. B. CUTTER, M. D., Watsonville, Cal.

As it has been truly said, "With the best of good-will concentrated on hospitals, in countries most advanced in the arts of civilization, it has taken centuries of unflagging effort to lift hospitals to a position of safety and desirability. It was still a question sixty years ago, whether the establishment of hospitals in such countries as England and France was an event fraught with good or evil. In our own day the good accomplished by hospitals is not a subject of dispute. Nevertheless, the precise place a hospital should occupy in the body politic, the proper seat of responsibility for its existence and work and the principles of its organization, remain fruitful subjects of investigation and debate.

W. H. Smith, in discussing this subject, says: "The hospital is now looked upon as an essential public service institution. It is the place of first resort in sickness or injury of any very acute or serious nature; but the hospital provides for the poor and well-to-do, but makes no special provision for that large class of persons of moderate means who do not want charity, but who can neither afford the expensive private service, nor bring themselves to accept the conditions of the charity ward. . . . The status of the hospital administrator must be clearly understood, else we shall have no administrator worthy of the name. Hospital administration is a specialty, and an important one in our scheme of hospital development."

Referring further to the same subject, Ray Lyman Wilbur says: "There are two general problems involved; first, the development of high-grade administrators, with a medical education, who can serve as leaders of medical education, and public health. When suited for it their positions should be dignified, and opportunity should be given to them to be influential in the whole public health movement, in medical education, and in furthering the progress of medical knowledge."

There is hope that the lot of the hospital administrator and medical economist may become more attractive. In the judgment of many it is important in the successful development of our larger hospitals, that the medical men of the best type and ability should enter this field.

During thirty years' association with hospitals on the Pacific Coast, I have experienced the vicissitudes of many hospitals in an administrative capacity. Until the last decade their standing has been low in the scale of modern hospital excellence. Fifteen years ago I entered the field of hospital activities in one of the larger cities of California, with an earnest desire to take some part in helping to accomplish what I see being accomplished now. At that time it was an admitted fact by the leading men of the profession of that place that there was but one hospital in that city

* Read before the Santa Cruz County Medical Society, at its meeting held in Santa Cruz March 6, 1922.

that did not place profits above good service and good name; that hospital was managed by the Sisters of the Catholic Church.

Today the situation is different, and I believe, through the activities of the committee for hospital betterment of the League for the Conservation of Public Health, of which Dr. Musgrave is the chairman, and which also represents the hospital interests and plans in California of the American Medical Association, that state of affairs no longer exists.

California is branching out with full impetus in the new hospital movement. Modern hospitals are being built or being planned in many progressive towns. While as yet these communities are not educated up to the point of filling their subscription lists with substantial voluntary gifts seen in older communities, we do have the encouraging example of a nearby community where within the past year subscriptions of a quarter of a million have been made under the stipulated agreement that not more than 7 per cent interest should be paid on certificates of stock, and as high as $35,000 has been given outright to the hospital in a single subscription.

This is decidedly a step in advance from the position of a leading hospital in a neighboring city, where the boast was made of payments of dividends on stock of 24 per cent only a few years ago. Under the present plan and influences of an organized medical profession it need not be feared that these new hospitals will not square in all particulars of organization and administration with the best hospital traditions of the State and of the country.

In one community in New England of 11,500 population, with an adjacent population of 20,000 it was decided to build a community hospital, and the sum necessary was placed at $225,000. In order to meet the difficult task of raising this money an organization was effected, an office was opened, and the preparatory work of the director and his staff was begun. It was realized that the success of the undertaking depended upon the thorough education of the public in the necessity of a modern hospital. The Chamber of Commerce, Women's Club, and other organizations passed resolutions endorsing the undertaking and urged the public to support the movement to raise the $225,000. After thorough preparation for the campaign to raise the money subscription lists were opened, and on the first day of the returns $50,000 was subscribed. The final report, after a vigorous campaign of several weeks, showed that $273,465 had been *given* by 4862 subscribers.

What was regarded as remarkable by the several hundred public spirited citizens, men and women who raised the fund with its 21½ per cent oversubscription, as one of the most gratifying features of the undertaking, is the fact that throughout the movement there was not a single evidence of the use of coercive measures to obtain subscriptions. The hospital, as a result of thus going frankly before the people in the manner indicated, has gained at least four thousand new supporters, who subscribed liberally, but the hospital succeeded in convincing them by facts alone that it is an institution that merited their support.

"The handling of hospital funds and the operating of a hospital is a sacred trust"; this I have always maintained, and entails a degree of obligation far in excess of the handling of most funds.

Communities contribute of their funds to hospitals because they have faith in the efficiency of these hospitals and because they believe they are assisting in a wonderful work. It is incumbent upon the administration of hospitals to conduct their business so that the trust is not misplaced, and this cannot be accomplished without accurately recording all the activities of the hospial.

What a contrast today with the condition in the eighteenth century, when many new hospitals were built, but in respect of cleanliness and administration these institutions sunk to the lowest level known in the history of medicine. "The Modern Hospital" says editorially that "Hospitals, more than any other institution today, have within their grasp the opportunity to dignify human life; that is one of the largest parts of their social service. Will they do it? Upon the occasion of the celebration of the one hundred and fiftieth anniversary of the founding of the New York Hospital, Hon. Elihu Root, long a member of the Board of Governors of the Hospital Society, made the following remarks in the course of his address.

"But I think there is something besides the curing of disease or the advancement of science, something that is broader than that, broader than any of these. All the terrible lessons of the last decade show clearly that the most insuperable obstacle to the peace and happiness and progress and growth of a people is their incapacity to receive the blessings that are ready for them if they will but take them. The world is full of murder and hatred and strife today, because of the incapacity of millions of people in organized States to receive the truth that is being spread, and has spread, throughout our higher forms of civilization and which is to be theirs in centuries to come, but they are not ready for it now.

"This is not a matter of intellectual power, it is not a matter of learning, it is not a matter of precept, it is a matter of the development of character. All the sermons ever preached, all the orations ever delivered, all the books ever printed, working through the brain of man, cannot create in him the highest qualities that man is capable of. The development of character must come through exercise by men themselves of the virtues that make human character, mercy, compassion, kindly consideration, brotherly affection, sympathy with fellowmen, unselfish willingness to sacrifice for others."

As love of service to humanity animated those who founded the first hospitals in this country, and many who have followed them, it must animate those who create and operate a modern hospital.

EDITORIALS

RAY LYMAN WILBUR

In selecting Ray Lyman Wilbur President-Elect of the A. M. A., our National Association, in addition to conferring upon Dr. Wilbur the greatest honor within the gift of the physicians of the United States, has honored our State, a great medical school and every physician of California.

Members of the Medical Society of California are greatly pleased with Dr. Wilbur's election, and on their behalf and in their names we congratulate him and pledge him our full co-operation and support in making a striking success of the 1923 meeting of the A. M. A.

Dr. Wilbur's conspicuous services in the cause of better medicine and better public health are reviewed in an editorial in the Journal of the A. M. A. of June 3, 1922.

THE 1923 MEETING OF THE A. M. A.

The 1923 meeting of the A. M. A. is to be held in San Francisco, June 25-29.

The privilege and honor of entertaining this the greatest of all medical organizations was won by the earnest endeavors of the San Francisco Convention and Tourist League and of our own delegates who attended the meeting, C. Van Zwalenburg, Albert Soiland, Victor G. Vecki and E. C. Fleischner, are to be congratulated on their splendid representation of our Society's affairs at the National Convention. They were ably seconded in their efforts by the delegates from other western States, and particularly by the enthusiastic support of J. A. Pettit of Oregon.

As hosts for the A. M. A., California, and the Medical Society in particular, have accepted an important and serious responsibility. With all the agencies interested in the medical welfare of the State working effectively and in harmony, the 1923 meeting can be made a memorable one.

The Council of the State Medical Society will give consideration to the problems involved at its meeting in Los Angeles the first week in September. There will be plenty to do for all who are willing to work. It is not too much to hope for the full co-operation and assistance of our members in preparing and executing plans that will make this the banner meeting of our National Association.

OPERATING WITHOUT PERMISSION

Hospitals and physicians throughout the State should learn one lesson at least from the undesirable publicity in which the San Francisco Hospital finds itself involved. There seems to be no question whatsoever but what performing an operation without proper permission from the patient or the person responsible for the patient, in case of a minor, is a violation of the law in California. Physicians and hospitals, whatever their private opinions may be, should be law-abiding in all of their actions.

The dangers connected with violation of this particular law have been emphasized a number of times in the Journal, in Better Health and wherever medical societies meet.

The League for the Conservation of Public Health, with the approval of the Council of the State Medical Society, has issued a form for permit to operate, which has been reviewed by our attorneys and which complies with the law in every respect. Samples of these forms will be issued to any hospital or physician requesting them.

Any hospital that does not absolutely prohibit any sort of an operation within its walls, or even the giving of an anesthetic preparatory to operation, without a properly worded written permit is pursuing a hazardous course and one that is illegal as well.

HOSPITAL CONVENTION

The second annual convention of the hospitals of California will be held under the auspices of the League for the Conservation of Public Health on Tuesday to Friday, September 5 to 8, at the Maryland Hotel in Pasadena.

On Friday, September 8, the Council of the State Medical Society will hold two meetings at the Maryland Hotel. One meeting will be at 10 a. m. and the other at 8 p. m.

On Saturday, September 9, the Council of the State Medical Society will meet with the presidents and secretaries of all County Medical Societies. This meeting will open with a luncheon at the hotel and continue until the program has been disposed of.

These combined meetings will bring together large numbers of persons interested in all phases of medical, hospital and public health betterment. Monday, September 4, and Saturday, September 9, are holidays. Very attractive rates and facilities have been arranged for at the Maryland Hotel, and all persons interested in any phase of hospital work are cordially invited to plan to spend the first week of September at the convention.

The program for the hospital convention is now in course of preparation. It will be carried out along the same general lines that made the convention last year so successful. All physicians, trustees, directors, administrators, nurses, technicians, record secretaries, and other persons interested in hospitals should be present at this meeting and take part in the discussions.

Dr. Charles D. Lockwood, 295 Markham place, Pasadena, is chairman of the committee of arrangements. This committee, the hotels, the Chamber of Commerce and other civic organizations are at work upon plans to make the social and recreational features of the convention attractive.

See the August numbers of the JOURNAL and of Better Health for further publicity.

For reservations, address Mr. H. M. Nickerson, Resident Manager, Hotel Maryland, Pasadena, California.

STATE SOCIETY

MINUTES OF THE HOUSE OF DELEGATES, THE FIFTY-FIRST ANNUAL SESSION OF THE MEDICAL SOCIETY OF THE STATE OF CALIFORNIA.

FIRST SESSION

Held at Yosemite National Park, Monday evening, May 15, 1922, at 8 o'clock

Roll-call—Seventy-three (73) delegates were seated, and the president, John H. Graves, declared a quorum present.

Report of the President—The report of the president having been presented to the General Sessions was considered presented to this body. (For the full text of this report, see the June number of the Journal.)

Appointment of the Reference Committee—The president appointed the following Reference Committee: James H. Parkinson, Sacramento, chairman; Howard Morrow, San Francisco; Charles D. Lockwood, Pasadena, and Hartley F. Peart, General Counsel of the Society, ex-officio.

Report of the Council—The president announced that the chairman of the Council, Dr. Kenyon, was ill, and called upon Dr. Bine to make the report of the Council:

Because of the absence of Dr. Kenyon, I was asked but a few minutes ago, to address this meeting. One of the things that I would particularly like to emphasize is the sorrow of the Council in not having Dr. Kenyon with us tonight. It is more than twenty years ago that Dr. Kenyon first became a member of the Council of the State Society. In all that time he has never failed to attend one of its meetings, and this House of Delegates, I feel, should pass a resolution commending the work of Dr. Kenyon.

The work of the Council has been so voluminous that it is impossible for me, on short notice, to give you a proper presentation of its activities. A good deal of its time during the past year has been devoted to the problem of industrial accident work. One of its committees, in particular, has made a special study of this subject and its report was presented at the general meeting this morning.

The legal problems of the Society have required many hours of consideration. You will pardon me if I dwell upon this work, but I feel that, in spite of all that Mr. Peart has done to bring this matter before the County Societies and their members, a large majority of the members do not appreciate the situation. The Council is familiar with every case that comes before the legal department. It stands back of Mr. Peart and the Society's members at all times. No one can tell when his hour of worry, trial and tribulations may come. Some medical men and specialists feel that it is only the surgeons who may get sued, but the files of the legal department indicate otherwise. Many a physician believes that he is immune; suddenly a summons appears and then the individual wakes up to realize that he is absolutely unfamiliar with the work of the legal department, his rights and his duties; and occasionally by his actions complicates the matter of his defense.

The cost of the legal department is a matter of considerable importance. We pay much less for our medical defense than do individuals who carry insurance in the old-line companies. One of the companies has increased its premiums to $75 a year. During 1921 the medical defense cost our Society about $17,500, or about $5 per member. In order to meet this expense we shall be obliged to raise our dues though a majority of the members of the Council feel the increase should be greater than the two dollars proposed.

One rather important step was taken last year when a large and successful meeting of the presidents and secretaries of the county societies was held in San Francisco with the Council and officers of the State Society. Very much good was accomplished by this meeting.

There is another piece of work to which the Council wishes to call your attention. For many years the Council has been hoping to get access to the columns of the lay press in order to educate the public along medical lines. Finally an opportunity came when one of the San Francisco papers agreed to publish a series of articles. This matter was referred to the League for the Conservation of Public Health, and articles that have been published have attracted widespread attention. In fact, one of the Los Angeles papers is now conducting a similar column, and several other newspapers in this State have been trying to follow suit. The matter, however, is not a simple one and, without the backing of the League for the Conservation of Public Health and the Society, they cannot succeed. The Council feels that these health columns are a very valuable means for reaching the public.

Report of the Committee on Scientific Program—The secretary, as chairman ex-officio of the Committee on Scientific Program, submitted the following report:

The activities of the Committee on Scientific Program are shown in the complete program of the meeting which was published in the May number of the California State Journal of Medicine.

The Program Committee wishes to call the attention of all members to a ruling of the Council by which the officers of the various sections are responsible for the scientific programs of their sections. The committee of the State Society on scientific program by the same ruling fixes the number, time and place of the meetings of the various sections, and uses its good offices to promote harmony and co-ordination between the activities of the various sections.

Report of the Auditing Committee—The report of the auditing committee and the firm of certified public accountants, who officially audit the accounts of the Society once a year, having been previously passed upon and approved by the Council of the State Society, was submitted to the House of Delegates and accepted by that body.

Report of the Committee on Expert Medical Testimony—The committee submitted no report.

Report of Committee on Local and State Expenditures for Medical and Sanitary Measures—The committee submitted no report, and was ordered continued.

Report of Committee on Codification of Constitution and By-Laws of the Medical Society of the State of California—The committee, consisting of the attorney and secretary of the State Society submitted a proposed codification of the constitution and by-laws, which was referred to the reference committee without reading, inasmuch as the constitution provides that these amendments must be published twice during the year in the Journal of the Society.

Report of the Committee on Industrial Accident Insurance—The report was presented at the General Sessions by the chairman, James H. Parkinson, and is considered presented to this body. For complete text of this report, see minutes of second session.

Additional comment made by Dr. Parkinson as chairman is also published in this issue of the Journal on page 222.

Report of the Secretary-Editor—W. E. Musgrave, secretary-editor, submitted the following report:

President Graves in his address this morning and Dr. Bine in the report of the Council have covered the major activities of the Society. There are a few things I would like to have you think about: California is very fortunate in having three good medical schools. This, with the other advantages in medical matters, ought to make us a great medical center. We are not availing ourselves fully of the opportunities thus offered. What are we going to do about it?

Our Society is over fifty years old. We still have only approximately 50 per cent of the eligible physicians of the state in our membership. There are about 6900 licensed physicians in California and there are about 3500 of them members of this Society. What are we going to do about that? What can we hope to do when some commercial enterprise not interested in quality of professional work says: "I don't care a d—— about the State Society; I can get all the doctors I want from among those duly licensed but not members of your Society to accept my proposition." When our membership includes at least 90 per cent of the eligible physicians, and all members act in accordance with the wishes of the majority, we can do many things worth while for both the public and the profession. Eligible physicians who are not members ought to be made to realize that others are carrying the burden and cost of service for all.

These things are commended to your serious consideration, and at the same time you are invited to review the consequences of failure to improve our organization in numbers and team-work among the members.

Report of the Legal Department—The report of the Legal Department was presented by general attorney, Hartley F. Peart, at the general sessions, and is considered presented to this body and will

be referred to the reference committee. (The report will be published in an early number of the Journal.)

Unfinished Business—There was no unfinished business to come before the meeting.

New Business—In accordance with the rules of the Society, the following resolutions were presented and referred to the Reference Committee:

Resolution No. 1. Rate Cutting in Industrial Accident Insurance Work—Presented by the Section on Industrial Medicine and Surgery, through the Council. For text of resolution and final action by the House of Delegates see minutes of the Second Session.

Resolution No. 2. California Association of Radiographers—Presented by Dr. Sol Hyman. For text of resolution and final action by the House of Delegates see minutes of the Second Session.

Resolution No. 3. Uniformity in Medical Fees—Presented by E. F. Reamer, delegate from Stanislaus County Medical Society. For text of resolution and final action by the House of Delegates see minutes of the Second Session.

Resolution No. 4. Director of State Institutions—Presented by San Joaquin County Medical Society. For text of resolution and final action by the House of Delegates see minutes of the Second Session.

Resolution No. 5. Exceptions to State License Requirements—Presented by Council of the State Society. For text of resolution and final action see minutes of Second Session.

Resolution No. 6. Instruction of Delegates to A. M. A.—Presented by the Council. For text of resolution and final action see minutes of Second Session.

Resolution No. 7. A. M. A. Meeting for 1923—Presented by the Council. For text of resolution and final action see minutes of Second Session.

Resolution No. 8. Better Health Service—Presented by the Council. For text of resolution and final action see minutes of Second Session.

Resolution No. 9—Health Centers—Presented by the Council. For text of resolution and final action see minutes of Second Session.

Resolution No. 10. Extension of Better Health Service—Presented by the Council. For text of resolution and final action see minutes of Second Session.

Resolution No. 11. Annual Dues—Presented by the Council. For text of resolution and final action see minutes of Second Session.

Resolution No. 12. Provision for Segregating Expenses and Method of Providing Medical Defense—Presented by the Council. For text of resolution and final action see minutes of Second Session.

Resolution No. 13. Indemnity Defense Fund Assessment—Presented by the Council. For text of resolution and final action see minutes of Second Session.

Adjournment—There being no further business, the meeting adjourned to meet Wednesday evening, May 17, 1922, at the same time and place.

SECOND SESSION

Wednesday Evening, May 17, 1922

The roll being called, seventy (70) delegates were found to be present, and the president, John H. Graves, declared a quorum present.

Place of Meeting, 1923—The secretary announced that by unanimous action of the Council, the invitation of the San Francisco Convention and Tourist League has been accepted, to hold the 1923 meeting in San Francisco in the Civic Auditorium.

Election of Officers

President-Elect—T. C. Edwards of Salinas, Monterey County, was nominated for President-Elect by Saxton T. Pope of San Francisco. The nomination was seconded by W. T. McArthur of Los Angeles. Acting under authority of a positive motion, the secretary cast the ballot, and T. C. Edwards was declared elected President-Elect of the Society for the year 1922.

First Vice-President—Percy T. Magan of Los Angeles was nominated for First Vice-President by Charles D. Lockwood of Pasadena. The nomination was seconded by W. W. Beckett of Los Angeles. Acting under authority of a positive motion, the secretary cast the ballot, and Percy T. Magan was declared elected First Vice-President for the ensuing year.

Second Vice-President—W. W. Cross of Fresno was nominated for Second Vice-President by G. W. Walker of Fresno. The nomination was seconded by Rene Bine of San Francisco. Acting under authority of a positive motion, the secretary cast the ballot, and W. W. Cross was declared elected Second Vice-President.

Secretary—W. E. Musgrave of San Francisco was nominated for Secretary by George H. Kress of Los Angeles. The nomination was seconded by W. W. Beckett of Los Angeles. Acting under authority of a positive motion, the president cast the ballot, and W. E. Musgrave was declared elected Secretary for the ensuing year.

Councilors

Second District—William H. Kiger was nominated by Harlan Shoemaker of Los Angeles for Councilor for the Second District, said nomination being seconded by Donald J. Frick of Los Angeles. Acting under authority of a positive motion, the secretary cast the ballot, and William H. Kiger was declared elected Councilor for the Second District for the ensuing three years, to succeed himself.

Fourth District—Fred R. De Lappe of Modesto was nominated by W. W. Cross of Fresno for Councilor for the Fourth District, said nomination being seconded by Saxton T. Pope of San Francisco. Acting under authority of a positive motion, the secretary cast the ballot, and Fred R. De Lappe was declared elected Councilor for the Fourth District for the ensuing three years, to succeed himself.

Sixth District—C. G. Kenyon of San Francisco was nominated by James H. Parkinson of Sacramento for Councilor for the Sixth District, said nomination being seconded by Rene Bine of San Francisco. Acting under authority of a positive motion, the secretary cast the ballot, and C. G. Kenyon was declared elected Councilor for the Sixth District for the ensuing three years, to succeed himself.

Eighth District—James H. Parkinson of Sacramento was nominated by E. T. Rulison of Sacramento for Councilor for the Eighth District, said nomination being seconded by E. C. Turner of Sacramento. Acting under authority of a positive motion, the secretary cast the ballot, and James H. Parkinson was declared elected Councilor for the Eighth District for the ensuing three years, to succeed himself.

At Large—O. D. Hamlin of Oakland was nominated by L. P. Adams of Oakland for Councilor-at-Large, said nomination being seconded by P. T. Phillips of Santa Cruz. Acting under authority of a positive motion, the secretary cast the ballot, and O. D. Hamlin was declared elected Councilor-at-Large for the ensuing three years, to succeed himself.

Member of Committee on Scientific Program—Lemuel P. Adams of Oakland was nominated by P. T. Phillips of Santa Cruz, a member of the Committee on Scientific Program, said nomination being duly seconded by John C. Yates of San Diego. Acting under authority of a positive motion, the secretary cast the ballot, and Lemuel P. Adams was declared elected a member of the Committee on Scientific Program for the ensuing four years, to succeed himself.

Delegates to the American Medical Association—The Council, having discussed the situation regarding delegates and alternates to the American Medical Association, the secretary was instructed to bring before the House of Delegates a clean slate, with the request that the House of Delegates proceed to the election of two delegates, with their corresponding alternates, to act for two years (1922 and 1923); and the election of two delegates, with their corresponding alternates, to act for one year (1922), in order to conform to the by-laws of the A. M. A.

Upon motion of Walter V. Brem of Los Angeles, regularly seconded, Charles D. Lockwood

of Pasadena was nominated for Delegate to the A. M. A. for a two-year term. Acting under authority of a positive motion, the secretary was instructed to cast the ballot, and Charles D. Lockwood was declared elected Delegate to the A. M. A. for a two-year term.

Upon motion of George H. Kress of Los Angeles, seconded by Harry J. Spiro of San Francisco, Victor G. Vecki was nominated for Delegate to the A. M. A. for a two-year term. Acting under authority of a positive motion, the secretary was instructed to cast the ballot, and Victor G. Vecki was declared elected Delegate to the A. M. A. for a two-year term.

Upon motion of Charles D. Lockwood of Pasadena, seconded by Rene Bine of San Francisco, C. Van Zwalenburg of Riverside was nominated Delegate to the A. M. A. for a one-year term. Acting under authority of a positive motion, the secretary was instructed to cast the ballot, and C. Van Zwalenburg was declared elected Delegate to the A. M. A. for a one-year term.

Upon motion of Rene Bine of San Francisco, seconded by Saxton T. Pope of San Francisco, E. C. Fleischner of San Francisco was nominated for Delegate to the A. M. A. for a one-year term. Acting under authority of a positive motion, the secretary was instructed to cast the ballot, and E. C. Fleischner was declared elected Delegate to the A. M. A. for a one-year term.

Alternates to the American Medical Association—Upon motion of Donald J. Frick, seconded by Rene Bine, Walter V. Brem of Los Angeles was nominated for Alternate to Charles D. Lockwood. Acting under authority of a positive motion, the secretary cast the ballot, and Walter V. Brem was declared elected Alternate for Charles D. Lockwood for two years.

Upon motion of Dow H. Ransom of Madera, seconded by Saxton T. Pope, Harry J. Spiro of San Francisco was nominated for Alternate to Victor G. Vecki. Acting under authority of a positive motion, the secretary cast the ballot, and Harry J. Spiro was declared elected Alternate for Victor G. Vecki for two years.

Upon motion of W. T. McArthur, seconded by Percy T. Magan, Albert Soiland of Los Angeles was nominated for Alternate to C. Van Zwalenburg. Acting under authority of a positive motion, the secretary cast the ballot, and Albert Soiland was declared elected Alternate for C. Van Zwalenburg for one year.

Upon motion of Saxton T. Pope, seconded by Rene Bine, Walter C. Alvarez of San Francisco was nominated for Alternate for E. C. Fleischner. Acting under authority of a positive motion, the secretary cast the ballot, and Walter C. Alvarez was declared elected Alternate for E. C. Fleischner for one year.

Delegates to the A. M. A., with their corresponding alternates, are as follows:

Charles D. Lockwood, Pasadena, 1922 and 1923; Alternate, Walter V. Brem, Los Angeles, 1922 and 1923.

Victor G. Vecki, San Francisco, 1922 and 1923; Alternate, Harry J. Spiro, San Francisco, 1922 and 1923.

C. Van Zwalenburg, Riverside, 1922; Alternate, Albert Soiland, Los Angeles, 1922.

E. C. Fleischner, San Francisco, 1922; Alternate, Walter C. Alvarez, San Francisco, 1922.

REPORT OF THE REFERENCE COMMITTEE

James H. Parkinson, chairman of the Reference Committee, reported as follows for the committee:

1. **President's Address**—

(a) **Indemnity Defense Fund**—The committee recommends that every member of the Society who regards himself as in active practice become a member of the Indemnity Defense Fund.

(b) **Medical Education**—The committee recommends that each County Society provide for the presentation annually of a paper on medical edution by one of its members not engaged in teaching.

(c) **Lay Medical Activities**—The committee recommends that physicians in every community carefully study suggested medical activities emanating from sources outside the profession before affiliating themselves with them, especially upon a gratuitous basis.

Upon motion duly made and seconded, it was unanimously resolved that the report of the committee, upon the president's recommendations, be accepted and referred to the Council with authority to act.

2. **Report of the Committee on Industrial Accident Insurance**—The text of the report is as follows:

The report of the committee at the San Diego meeting in 1921 stated that the new fee schedule had become effective in June of the previous year, and that the forms for reports had been issued and were being adopted by the insurance companies.

The question of a further increase in the fee schedule was believed to be inadvisable and the committee still believes that no advance should be sought at this time.

The formation of a permanent committee of adjustment was strongly recommended as a valuable factor in eliminating trouble between the profession and the carriers. It was felt that such a committee could insure the payment of all reasonable claims, thus incidentally increasing the general standard of remuneration.

The necessary expense that must be incurred in the establishment and operation of such a committee was regarded as beyond the resources of the society. The hope was expressed that a full time secretary could accomplish something along these lines and, at the same time, get some idea of the possible volume of business that might be transacted.

Two propositions were submitted for discussion and action: The flat fee originally advocated by Dr. Graves and the enlargement of the so-called panel. The report was unanimously adopted by the society.

The committee has held fewer meetings during the past year and much of the detail work in signing up companies on the fee schedule and in extending adoption of the report blanks has been done through the secretary's office. Our attorney here, as always, has been of invaluable assistance and steady progress has been made.

It may seem rather an ambitious project to have the California blank generally adopted as a standard form for all compensation carriers. There is no reason whatever why a standard form, even of simpler character, should not be in general use. It would simplify business, promote accuracy and save a great deal of correspondence. Purely as an economic measure, it offers great possibility, and from this standpoint it should be pushed with the companies.

The two propositions already mentioned were taken up by the committee, but, as the flat fee

in a measure was directly related to a revised fee schedule and should be discussed in relation thereto, it was dropped for the present.

The question of enlargement of the panel was quite exhaustively discussed by the committee at its meetings and at conferences with the secretary and the attorney. It was finally decided to submit a report of a general character requesting the various county societies to certify panels, but omitting all references to plans or methods by which this should be accomplished. This course was adopted as the question was manifestly a very difficulty one to deal with. The report is as follows:

THE REPORT AS AMENDED AND FINALLY ADOPTED

Adoption of Blanks and Fee Schedule—The committee requests that it be authorized to hold conferences with insurance companies and with individual representatives of same, to secure the general adoption of the Society's blanks which automatically adopts the fee schedule.

Increase in Fees—The committee believes conditions at present are inopportune for seeking an increase in the present fee schedule and recommends that action be deferred until prices have been stabilized and the business outlook improves.

Enlargement of the Panel—In line with its former suggestions the committee believes steps should at once be taken to enlarge the panel. It recognizes that, while many physicians believe the injured employe should have the right to choose his medical attendant, this right cannot be conceded by those legally responsible for his care and legally liable for every expense attached thereto. At the same time there is no reason why men competent to do surgical work and to make the necessary reports should not be permitted to treat all cases referred to them by employers.

The question of professional competence is not based upon personal preference, nor can it with certainty be determined by a layman nor, indeed, by an insurance company not employing a medical director. The medical profession is the only judge of the qualifications of its members and their efficiency in the various specialties.

The committee, therefore, recommends that various County Societies be requested to assume this responsibility toward the State and that each society be instructed to certify to the Secretary of the State Society a list of its members competent by education, training, experience and licensure, to do the industrial surgery required in industrial accident insurance, willing to undertake this work and willing to make prompt and accurate reports of all cases. If a physician claims to be praticing any specialty exclusively, his specialty should be indicated with his experience and qualifications as above mentioned.

It is recommended that the County Societies assume the responsibility not only of providing the state Secretary with this original list but of providing at least a monthly list showing changes in this panel.

No attempt should be made to indicate the manner in which any society shall reach its conclusions, nor is any machinery suggested for determining the result. It must, however, be understood that every society certifying a panel will stand sponsor for the accuracy of the statements given as to the men's education, training and other qualifications to do insurance work, and agrees to demand from them and extend to them the customary professional support and courtesies.

The committee believes that if this course be adopted by the County Societies it will result in better treatment for beneficiaries and a more equitable distribution of industrial medicine practice, and that carriers when assured of these facts will accept the plan.

JAMES H. PARKINSON,
JOHN H. GRAVES,
GAYLE G. MOSELEY.

The report was presented to the council in October and was unanimously adopted. It was subsequently presented to the Industrial Medicine Section of the San Francisco County Medical Society by the full committee and the secretary and the attorney. Later it was laid before the Los Angeles County Medical Association at a special meeting, the full committee and the secretary and the attorney also being present. Prior to this, the subject had been presented to the Sacramento Society for Medical Improvement.

As a result of these gatherings a very general discussion of the question ensued, and in light of the suggestions evolved the report was taken up at the meeting of the council in January and amended so as to make the conditions of certification more specific.

It had now become apparent that the county societies wanted a definite procedure outlined, and this was emphasized in the extensive correspondence that followed. In deference to this general sentiment, questionnaires and form letters were submitted by the secretary and, after conferences with the committee and examination by the attorney, were amended and ordered printed and issued.

The following are the forms as finally approved:

.....M. D.
Secretary.....County Medical Society

Dear Doctor:

After mature deliberation, the State Medical Society's Committee in Industrial Medicine submitted the following report at the meeting of the Council on September 24, 1921, when it was adopted in principle. It was amended and resubmitted at the meeting on January 28, 1922; was unanimously approved and ordered put into effect.

Adoption of Blanks and Fee Schedule—The committee requests that it be authorized to hold conferences with insurance companies and with individual representatives of same, to secure the general adoption of the Society's blanks which automatically adopts the fee schedule.

Increase in Fees—The committee believes conditions at present are inopportune for seeking an increase in the present fee schedule and recommends that action be deferred until prices have stabilized and the business outlook improves.

Enlargement of the Panel—In line with its former suggestions the committee believes steps should at once be taken to enlarge the panel. It recognizes that, while many physicians believe the injured employe should have the right to choose his medical attendant, this right cannot be conceded by those legally responsible for his care and legally liable for every expense attached thereto. At the same time, there is no reason why men competent to do surgical work and to make the necessary reports should not be permitted to treat all cases referred to them by employers.

The question of professional competency is not based upon personal preference, nor can it with certainty be determined by a layman nor, indeed, by an insurance company not employing a medical director. The medical profession is the only judge of the qualifications of its members and their efficency in the various specialties.

The committee, therefore, recommends that various County Societies be requested to assume this responsibility toward the State and that each Society be instructed to certify to the Secretary of the State Society, a list of its members competent by education, training, experience and licensure, to do the industrial surgery required in industrial accident insurance, willing to undertake this work and willing to make prompt and accurate reports of all cases. If a physician calims to be practicing any specialty exclusively, his specialty should be indicated with his experience and qualifications as above mentioned.

It is recommended that the County Societies assume the responsibility not only of providing the State Secretary with this original list but of providing at least a monthly list showing changes in this panel.

No attempt should be made to indicate the manner in which any society shall reach its conclusions, nor is any machinery suggested for determining the result. It must, however, be understood that every society certifying a panel will stand sponsor for the accuracy of the statements given as to the men's education, training and other qualifications to do insurance work, and agrees to demand from them and extend to them the customary professional support and courtesies.

The commitee believes that if this course be adopted by the County Societies it will result in better treatment for beneficiaries and a more equitable distribution of industrial medicine practice, and that carriers when assured of these facts will accept the plan.

JAMES H. PARKINSON,
JOHN H. GRAVES,
GAYLE G. MOSELEY.

This report is submitted to your society with the following suggestions and recommendations:

1. That you endorse the report and instruct your governing body to carry out its provisions.
2. That you have executed the accompanying forms, returning them promptly to this office.
3. That, after the list is completed and in the hands of the State Secretary, you will forward as often as necessary but always in your monthly report any and all changes in your society's panel.

Sincerely yours,

.....
Secretary.

California State Medical Society,

.....County Medical Society, and

.....M. D., member.

Agreement

(If interested in doing Industrial Medicine and Surgery and in being on the panel submitted by the Medical Society, please prepare this form and return it promptly to the Secretary of your County Society.)

I have read the report of the Committee on Industrial Medicine as approved by the Council. I am familiar with the provisions of the Workmen's Compensation

Act and with the rules, regulations and procedures through which it operates.

I understand that all the State Medical Society can do towards securing a wider and more equitable distribution of industrial work is to keep an authorized panel before the carriers. The amount of work secured by members must always be by superior facilities for conducting this business and by individual effort.

I agree to adhere to, follow and abide by the Fee Schedule as adopted May 11, 1920, and any amendments thereto hereafter approved by the Council of the State Medical Society, and the rules and regulations for the administration of the law approved, and any amendments thereto and any additional rules and regulations hereafter approved by the Council of the State Medical Society, including the arbitration and adjustment by any duly authorized committee of the State Medical Society of all controversies that may arise between myself, the carrier, the employer or the injured employe in relation to services performed under the provisions of the Workmen's Compensation Act.

..... M. D.
Residence.....
Date.....
Office Address.....
Office Hours.....
Telephones:—
Office .....
Residence .....
Emergency .....
Action by the.....
County Medical Society.

The data furnished below by.....
M. D., is believed to be correct and shows him to be prepared by education and experience to do competent industrial work.

He is a member in good standing of this Society, and has the official endorsement of the Society as a member of its panel for practice as shown in his statement.

.....County Medical Society
By..... Secretary
Date

Variety of Professional Work Desired

(The following data is necessary that your desires may be accurately presented to carriers.)

A. Do you wish to practice as
1. An Individual Physician .....
2. A Partnership .....
3. Group .....

B. Do you desire:
1. Emergency Work .....
2. Regular Work .....
3. Consultations .....

C. Do you desire:
1. General Practice .....
2. General Medicine .....
3. Neuropsychiatry .....
4. Dermatology .....
5. Communicable Diseases .....
6. Tuberculosis .....
7. Pediatrics .....
8. General Surgery .....
9. Orthopedic Surgery .....
10. Ophthalmology .....
11. Otorhinolaryngology .....
12. Urology .....
13. Brain and Nerve Surgery .....
14. Anesthesiology .....
15. Gynecology .....
16. Obstetrics .....
17. Pathology and Surgical Pathology .....
18. Clinical Laboratory Work .....
19. Radiology (Roentgenology) .....
20. Radium Therapy .....
21. Physiotherapy (including all forms of physical therapeutics) .....

D. Names and addresses of hospitals in which you work:
.....

E. If a partnership or group, give the names and addresses of all associates:
.....

F. If you desire emergency work, mention facilities and personnel for constant day and night service:
.....

Education, Training and Experience
(Information for Carriers)

Answer by number; use all the space desired.

1. General Education:
Schools and colleges attended; degrees and dates.
2. Professional Education:
Schools, degrees and dates.
3. Intern and Resident Experience:
Names of hospitals and dates.
4. Other Graduate Instruction or Special Work:
Give places and dates.
5. Outline of Experience Since Graduation:
6. Membership in Organizations:
Medical, fraternal, civic and welfare.
7. Present Activities:
Note any special features of work.
8. Industrial Medicine.
Note experience, also present relations and any other matters of interest.
9. Remarks:
Add any information that might be useful to interested carriers.

It will be some time before all the county societies will have reported and a longer period before the results have been tabulated and presented to the carriers. Meanwhile, the committee would again emphasize the fact that this does not mean more business for any member of the society. The committee feels it will result in a wider distribution. It again asserts that the executive officers of the society cannot create business and that as this business, legally, is assigned by one of two authorities—the carrier or the employer—physicians desiring to engage in same must seek it at its source.

The recommendation of the committee that an adjustment bureau should be created and that meanwhile the secretary's office would endeavor to conduct such business as might come to it, met with a prompt and rather unexpected response. Several of the insurance companies assumed that the bureau was already in operation, and this, with an increasing interest on the part of our membership, produced a mass of correspondence and detail work that the regular office force was inadequate to handle.

On December 1, 1921, Miss Virginia Davinroy was employed for the special purpose of dealing with the industrial accident problems, which affect our membership. Under the direction of the secretary, she has been carrying on the correspondence incidental to this work. She was also instructed to confer with the representatives of every insurance company doing compensation business in California to ascertain whether they were using the report blanks and, if not, to secure their adoption. The carriers were informed that the society had established an adjustment bureau and their co-operation with it was solicited.

At this date Miss Davinroy had conferred with thirty-one companies; of these six are using the society's report blanks and thirteen have agreed to use them after their present supplies are exhausted. Six of the local representatives are in favor of the blanks and will take up the matter with their home offices. Six companies expressed themselves as opposed to them, apparently on the ground that their use tended to inhibit cut-rate medical service.

Twenty-six of the companies are willing to co-operate with the society in every way and seem much impressed with the opportunity afforded.

It is hoped that the bureau now established will materially aid in the solution of our problems, while offering definite and practical service to our members. The data that will accumulate during the coming year should indicate our real needs. If these seem to demand a more extended service the committee will be prepared to submit a plan that will afford it.

JAMES H. PARKINSON,
JOHN H. GRAVES.
GAYLE M. MOSELEY.
Committee.

Action by Reference Committee—The committee recommends that the Committee on Industrial Medicine be continued and that the council, if it deems advisable, be authorized to extend the functions of said committee, and to establish an Industrial Service Department for the better regulation and control of the practice of industrial medicine and surgery, the relations of members engaged in such practice with insurance carriers and all re-

lated matters, said department ultimately to be placed upon a self-supporting basis.

Action by House of Delegates—Upon motion duly made and seconded, it was unanimously resolved that the recommendation of the committee be adopted as read and the action of the Committee on Industrial Accident Insurance be sustained.

2a. **Resolution No. 1—Rate-Cutting in Industrial Accident Insurance Work**—The text of the resolution is as follows:

Whereas, It is generally known to the medical profession of California that certain members of the medical profession and of the Medical Society of the State of California wilfully accept fees lower than schedule for services under the Workingmen's Compensation law and in various other ways circumvent the intent of the fee schedule adopted by the Medical Society of the State of California and the Industrial Accident Commission of California, and

Whereas, It is generally known to the medical profession of California that certain members of the medical profession and the Medical Society of the State of California wilfully and for the purpose of securing business, underbid their colleagues, thereby depriving them of business which they have secured, and by devious and unethical methods work harm in other ways to their confreres, and

Whereas, Such practices, if continued and extended, as will probably be the history in the Industrial Accident work, if not regulated, will work vast harm to the cause of medicine and the cause of medical science, therefore, be it

Resolved, That the Industrial Medicine and Surgery Section of the Medical Society of the State of California request the Society to, through its regular channels, investigate these conditions and practices and take action, if action is deemed proper, to secure relief, and

Resolved, That the Industrial Medicine and Surgery Section of the Medical Society of the State of California offer any information, testimony and assistance in its power to further this investigation and relief, and

Resolved, That it be the ruling of the House of Delegates that any violation of the fee schedule by any member, directly or indirectly, or any connivance thereat constitutes unethical conduct on the part of such member.

Action by the Reference Committee—The committee recommends the adoption of the resolution.

Action by the House of Delegates—Upon motion duly made and seconded it was unanimously resolved that the recommendation of the Reference committee be approved.

3. **Resolution No. 2—California Association of Radiographers**—The text of the resolution is as follows:

Resolved, That the Council (as members of the Advisory Council of the California Association of Radiographers) be instructed to vote in that body to amend the preamble thereof in accordance with the amendment thereof in the hands of the Publicity Bureau, and if same is not accepted by said association of radiographers, that the Council be instructed to sever all connections thereof, and for that purpose to bring about a meeting of the Advisory Council at as early a date as possible.

Action by Reference Committee—The committee recommends that in place of the resolution submitted to the House of Delegates at its meeting on Monday, May 15, 1922, the following preambles and resolutions be adopted as the sense of the society:

Whereas, The House of Delegates at the meeting held in Coronado in May, 1921, empowered the Council to organize associations of technical specialties, and

Whereas, The California Association of Radiographers was organized with a preamble and constitution which permits technicians to diagnose and to treat disease by means of the roentgen ray or radium upon the prescription of physicians, surgeons or dentists, and

Whereas, The section on radiology approves the formation of an association of technicians to be known as the Association of Radiographers, the membership to be limited to technicians who are working under the direct supervision of members of the State Medical Society;

Resolved, That it be the judgment of the Medical Society of the State of California that the diagnosis of disease and its treatment by X-Ray or radium therapy and the interpretation of plates of pathological conditions is the sole province of the medical profession;

Resolved, That X-Ray or radium treatment by lay technicians should never be administered except under the immediate supervision of a legally qualified practitioner;

Resolved, That members of the Association of Radiographers may only operate in laboratories under the direct supervision of a member of this Society;

Resolved, That the foregoing shall be deemed the interpretation of this Society of matters of policy affecting the educational and ethical activities of the members of the State Association of Radiographers, and that it is the sense of the Society that the preamble and constitution of the California Association of Radiographers be so amended as to give these resolutions effect; and that the Council of the Society be, and it is hereby instructed to carry out the necessary details in making them effective;

Resolved, That insofar as the radiographers and the dental members of the Association are concerned, the adjustment of this relationship be left to accredited members of the dental profession.

Action by the House of Delegates—Upon motion duly made and seconded it was unanimously resolved that the recommendation of the Reference Committee be approved.

4. **Resolution No. 3—Uniformity in Medical Fees**—The text of the resolution is as follows:

Because of the lack of uniformity in the matter of fees charged for medical services throughout the state, and because of the advantages of more uniformity, therefore, in accordinace with the suggestions of the State Secretary be it

Resolved, That a "committee on an ideal fee schedule" be appointed from members of the State Society, to study the whole question of fees, and prepare a report to be submitted to each county during the next year; this committee to report back to this body at the next annual meeting.

Action by the Reference Committee—The committee recommends that a committee of nine be appointed by the president to consider the whole question of medical fees and to report at the next annual meeting.

Action by the House of Delegates—Upon motion duly made and seconded it was unanimously resolved that the recommendation of the Reference Committee be approved.

5. **Resolution No. 4—Director of State Institutions**—The text of the resolution is as follows:

Whereas, The State hospitals for the insane and the Sonoma State Home for Feeble-Minded comprise the medical division of the State's service, and

Whereas, We feel that the care and supervision of these institutions should be under the direction of a medical man, and

Whereas, Dr. John A. Reily, former medical superintendent of the Patton State Hospital, has been appointed to the position of Director of State Institutions, and

Whereas, On account of Dr. Reily's long and efficient service in the care and management of the insane, we are confident that the department of the state's service under his jurisdiction will be conducted in an efficient and economical manner, be it

Resolved, That the San Joaquin County Medical Society at this meeting on May 12 commend Hon. William D. Stephens, Governor of the State of California, for appointing Dr. Reily, and be it further

Resolved, That a copy of these resolutions be forwarded to Governor Stephens.

Action by the Reference Committee—The committee recommends the approval of the resolution of the San Joaquin County Medical Society commending Governor Stephens for his action in appointing a medical man as superintendent of State Medical Institutions.

Action by the House of Delegates—Upon motion duly made and seconded it was unanimously resolved that the recommendation of the Reference Committee be approved.

6. **Resolution No. 5—Exceptions to State License Requirements**—The text of the resolution is as follows:

Resolved, That the Council of the State Society be authorized to make exception to the existing state license requirements for active membership in local and state societies in specific instances and under such conditions as seem to them sufficient.

Action by the Reference Committee—The committee recommends the approval of the resolution of the Council that it be authorized to make exceptions to existing state license requirements for active membership in local societies in specific instances and under such conditions as seem sufficient.

Action by the House of Delegates—Upon motion duly made and seconded it was unanimously

resolved that the recommendation of the Reference Committee be approved.

7. **Resolution No. 6—Instruction of Delegates to A. M. A.**—The text of the resolution is as follows:

Resolved, That it is the policy of the Society to instruct by resolution, either of the House of Delegates or of the Council, the delegates of this society to the American Medical Association, on all matters of national concern upon which this society either has or desires to institute a definite policy, or which, in the opinion either of the Council or of the House of Delegates peculiarly affects this society.

Action by the Reference Committee—The committee recommends approval of the resolution of the council that delegates to the A. M. A. be instructed on matters of national concern on which the society desires a definite policy.

Action by the House of Delegates—Upon motion duly made and seconded it was unanimously resolved that the recommendation of the Reference Committee be approved.

8. **Resolution No. 7—A. M. A. Meeting for 1923**—The text of the resolution is as follows:

Resolved, That delegates to the A. M. A. be instructed to use every effort to bring the A. M. A. to San Francisco for 1923.

Action by the Reference Committee—The committee recommends approval of the resolution of the council that delegates to the A. M. A. be instructed to use every effort to bring the association to San Francisco in 1923.

Action by the House of Delegates—Upon motion duly made and seconded it was unanimously resolved that the recommendation of the Reference Committee be approved.

9. **Resolution No. 8—Better Health Service**—The text of the resolution is as follows:

Whereas, the Better Health Service, conducted and edited for the San Francisco Examiner by the League for the Conservation of Public Health is presenting the important facts of modern preventive and curative medicine in practical and popular form, be it

Resolved, That the Medical Society of the State of California, assembled in its fifty-first annual convention, commend this worthy enterprise that is destined to conserve, protect and improve the public health.

Action by the Reference Committee—The committee recommends adoption of the resolution of the council commending the "Better Health Service" now being conducted in the public press.

Action by the House of Delegates—Upon motion duly made and seconded it was unanimously resolved that the recommendation of the Reference Committee be approved.

10. **Resolution No. 9—Health Centers**—The text of the resolution is as follows:

Whereas, It always has been and is the primary purpose of physicians to give trained, scientific, sympathetic service to all of their fellow citizens who need medical advice and to furnish this service to all alike, regardless of the social or financial standing of the patient, and

Whereas, It never has been and is not now necessary to interpose any agency not under the direct supervision and control of competent members of the medical profession, members are reminded of the dangers of co-operation in agencies where such supervision and control does not exist, and

Whereas, In order to re-emphasize these policies and practices to all citizens of California, and to counteract the influences going about the state to the effect that consideration by physicians for those needing medical advice can be obtained only by applying to some non-medical organization, and in order that the public may be fully informed and free to call directly upon the physician of its choice with the assurance of sympathetic and confidential consideration, therefore, be it

Resolved, By the Medical Society of the State of California and representatives of all county and other constituent organizations, in convention assembled, that the office of each of its 4000 members throughout the state is a "Health Center" of the kind that means the best medicine and public health advice that physicians can give; this upon the basis that those who can pay in full should do so, those who can pay part should do so, and those who are unable to pay should have the service without cost.

Resolved, That in order to secure special financial consideration, the patient is requested to execute and sign a paper showing his socio-financial status and setting forth briefly the reasons why he must ask for special financial consideration, this being the policy now being followed by clinics and welfare organizations of all sorts.

(Note:—The State Society will supply each of its members with appropriate blank forms for this purpose, and will furnish one to any citizen who desires to use it. One of these forms presented to any member of the State Society in any part of the state will insure the courtesies and special consideration that his condition warrants and, in addition, he will receive the same sympathetic, confidential, constructive help that is given to the person who is able to pay fully for all that he requires. In carrying out this program, physicians reserve the right, when they think wise, to check up on the accuracy of the applicant's statements in an unobtrusive and sympathetic manner, in exactly the same way as those reports are now being checked up by clinics and other welfare organization. Members also reserve the right to refer applicants for special consideration to other physicians under the same conditions and for the same reasons that they would refer patients paying regular fees. Any sick person in any part of the State of California who fails, for any reason, to secure adequate medical attention is requested to communicate with the Secretary of the State Medical Society, 929 Butler Building, San Francisco.)

Action by the Reference Committee—The committee recommends the adoption of the preamble and resolutions on "Health Centers," as introduced by the Council and submitted by a special committee consisting of Doctors Kress, Paterson, and Edwards.

Action by the House of Delegates—Upon motion, duly made and seconded, it was unanimously resolved that the recommendation of the Reference Committee be approved.

11. **Resolution No. 10. Extension of Better Health Service**—The text of the resolution is as follows:

Resolved, That the Publicity Bureau be instructed to present to the League for the Conservation of Public Health the desire of this Society to have it extend its "Better Health Service" as now conducted as rapidly as possible.

Action by the Reference Committee—The committee recommends that the Publicity Bureau be instructed to present to the League for the Conservation of Public Health the desire of this Society to extend this service.

Action by the House of Delegates—Upon motion, duly made and seconded, it was unanimously resolved that the recommendation of the Reference Committee be approved.

12. **Resolution No. 11. Annual Dues**—The text of the resolution is as follows:

Resolved, That the annual dues for the year 1923 be fixed at $10, and that a special committee be appointed to prepare a statement embodying the discussions of the Council on the question of dues in relation to medical and indemnity defense to submit to the House of Delegates.

Action by the Reference Committee—The committee recommends that the dues for the year 1923 be fixed at $10.

Action by the House of Delegates—After hearing the report of the special committee mentioned above, consisting of Doctors Bine, Pope, and Paterson, and a statement by Dr. Harlan Shoemaker, secretary of the Los Angeles County Medical Society, and Dr. W. W. Beckett of Los Angeles, upon motion duly made and seconded, it was unanimously resolved that the recommendation of the Reference Committee be approved.

13. **Resolution No. 12—Provision for Segregating Expenses and Method of Providing Medical Defense**—The text of the resolution is as follows:

Whereas, the secretary has explained that the increase in the dues this year depends upon three factors: extension work, industrial accident insurance adjustment bureau, and medical defense, and

Whereas, of these items that of medical defense is by far the largest; therefore, be it

Resolved, That the House of Delegates instruct the Council to present at the next annual meeting a plan by which the legal defense will be limited to those members who desire to receive and to pay for same as a separate charge; and that the assessment for medical defense be segregated from the general dues, so

that the dues may not be subjected to a possible advance for that purpose.

Action by the Reference Committee—The committee recommends that the resolution be adopted.

Action by the House of Delegates—Upon motion, duly made and seconded, it was unanimously resolved that the recommendation of the Reference Committee be approved.

14. **Resolution No. 13—Indemnity Defense Fund Assessment**—The text of the resolution is as follows:

Resolved, That an assessment of $10 be levied on the members of the Indemnity Defense Fund as of January 1, 1922, due and payable on or before August 1, 1922, and delinquent November 30, 1922.

Action by the Reference Committee—The committee recommends the approval of the resolution of the Council that an assessment of $10 be levied on members of the Indemnity Defense Fund as of January 1, 1922, due and payable on or before August 1, 1922, and delinquent November 30, 1922.

Action by the House of Delegates—Upon motion, duly made and seconded, it was unanimously resolved that the recommendation of the Reference Committee be approved.

15. **Report of the Committee on Codification of Constitution and By-Laws:**

Action by the Reference Committee—The committee recommends, in accordance with constitutional provision, that the proposed revised constitution and by-laws be published in the Journal twice during the year, and submitted for action at the meeting of 1923.

Action by the House of Delegates—Upon motion, duly made and seconded, it was unanimously resolved that the recommendation of the committee be approved.

Resolution of Appreciation—The following resolution was unanimously passed by the House of Delegates, and the secretary was instructed to send a copy to each of the officers concerned:

Resolved, That the House of Delegates of the Medical Society of the State of California wishes to make of record its very great appreciation of the earnest, sympathetic, effective efforts of the officers of the Yosemite Transportation Company and the officers of Camp Curry, in making the 1922 meeting of the Society so wonderfully successful, attractive and interesting;

Resolved, That the meeting adjourns with the unanimous feeling that everything possible has been done for our comfort and the success of our meeting; and a vote of thanks is extended to the Yosemite Lodge and its officers,, particularly Mr. H. H. Hunkins and Mr. R. E. McCormick; to Camp Curry, particularly Mrs. Curry and her assistants, for their splendid co-operation in making the convention so successful;

Resolved, That the Society also desires to express its appreciation to the Yosemite National Park Rangers for their unfailing courtesy, sympathy and assistance in helping to make the convention so successful.

Presentation of the President—Henry G. Brainerd of Los Angeles, the incoming president, was escorted to the chair by Doctors Bine and Yates. Dr. Brainerd presented his inaugural address to the general sessions, and it is published on page 215 of this number of the Journal.

Presentation of the President-Elect—Thomas Clay Edwards of Salinas, President-Elect, was escorted to the platform by Doctors Pope and McArthur, and expressed his appreciation of the honor conferred upon him.

Adoption of Minutes—The minutes of the first and second sessions were read and duly adopted.

Adjournment—There being no further business before the House, the meeting adjourned to meet in San Francisco at a time to be fixed by the Council.

REPORT OF THE DELEGATES OF THE MEDICAL SOCIETY OF THE STATE OF CALIFORNIA TO THE AMERICAN MEDICAL ASSOCIATION MEETING IN ST. LOUIS

The American Medical Association has held another successful annual meeting. St. Louis did well, entertaining five thousand medical men. This is no small task, and some crowding of hotels must be expected. There was little complaint, however, on this score, though the distance from meeting places, together with the scattered location of these was frequently deplored.

There was again evidence of the numerous special societies into which the medical profession is organizing itself. Many cluster about the larger meeting of the American Medical Association with its numerous sections, but are not a part of that organization. A living illustration of the enthusiasm for progress in the conquest of disease and the limitation of the lines of individual endeavor that each field may be the more deeply cultivated.

Aglow with possibilities stands the great inclusive organization of the A. M. A. with its eighty-nine thousand members, the greatest power for the relief of human suffering in all this world. Is there any excuse for this great body not acting as a unit? Really, there was less friction and rubbing of factions than at any previous meeting which I know of. Best of all it was more than ever evident that all were working together for the common good of the profession, and through it the greatest good to mankind.

One of the impressive actions of the House of Delegates was the endorsing of the plan to distribute blanks for the recording of physical examinations and re-examinations of our well patients.

Imagine the benefits resulting from systematic annual or semi-annual examination of all men, women and children in the United States.

The outstanding activity to us Californians was, of course, the always-important election of the president-elect and the selection of the next place of meeting. That we were able to secure both for California is ground for great satisfaction to your delegates. All stood together nobly, and many representative Californians, though not delegates, did yeoman service for our program. We are proud of Dr. Wilbur. We are certain that no mistake was made in his election. His grasp of the problems of medical education was no small factor in his selection for this honored position, and we trust there will be no disappointment in the hope that he will be able to unite the many varying plans for the much-needed revision of our medical curriculum.

More than all it was a pleasure and cause for rejoicing that California numbers so many staunch friends among the outstanding men of the profession in all parts of the United States. May we be able to live up to our opportunities, and may we stand together for the heartiest reception ever accorded the American men of medicine. The Association is worthy of all we can give it. It is no small task for the State, and a great undertaking for San Francisco to entertain the A. M. A. next June, which should have the whole-hearted support of the profession of the entire State.

Most of all, let us show our appreciation by attending in mass, that the full benefit may accrue to our entire membership.

C. VAN ZWALENBURG.
ALBERT SOILAND.
VICTOR G. VECKI.
E. C. FLEISCHNER.

COUNTY NEWS

ALAMEDA COUNTY

Alameda County Medical Society (reported by Charles L. McVey, secretary)—The May meeting was held at the Public Health Center in Oakland. The program was prepared by A. M. Meads from the members of the staff of the Alameda County Hospital. Charles Miller discussed the history of the County Hospital, emphasizing particularly the advance that had been made in the type of medical and surgical work being rendered the patients. A. H. Rowe demonstrated lantern slides illustrating several phases of Hypo- and Hyper-thyroidism. S. A. Jelte, T. J. Clark, A. Cary, F. Fontaine, and F. L. Loomis talked on the choice of minor procedures in obstetrics. Frank S. Baxter read a paper on Accessory Sinus Disease in Children. Q. O. Gilbert read a paper on Some Aspects of Intravenous Therapy in Severe Infections.

FRESNO COUNTY

Fresno County Medical Society (reported by T. F. Madden, secretary)—At the meeting on May 2 the society was the guest of the Burnett Sanitarium at a dinner at the Hughes Hotel. There were also present a delegation of twenty-one members of the Alameda County Society.

S. K. Jamgotchian, W. B. Milholland, and A. T. Goldberg of Fresno were elected to membership.

The program was furnished by the staff of the Merritt Hospital of Oakland. George Rothganger, M. D., acted as chairman, and the following papers were presented:

"Some Neglected Landmarks in Therapeutics," by H. N. Rowell; discussion by Dr. Schottstaedt of Fresno, and Dr. Alexander of Oakland.

"The Surgical Abdomen," by S. H. Buteau; discussed by Dr. Morgan and Dr. Cross of Fresno.

"X-ray Therapy," by A. C. Siefert; discussion by Dr. Milholland of Fresno.

"Spinal Anesthesia," by M. L. Emerson; discussants, Doctors Vanderburgh, Buteau, Rothganger, and Dixon.

RIVERSIDE COUNTY

Riverside County Medical Society (reported by T. A. Card, secretary)—The meeting of May 9 was held in the Chamber of Commerce rooms, with thirty members and ten guests present. Silas J. Brimhall of Elsinore, and Florilla M. White of Palm Springs were elected to membership.

The scientific program consisted of the following: Notes on the Management of Infants, Victor E. Stork, M. D., of Los Angeles; Dermatology and the General Practitioner, by Moses Scholtz of Los Angeles. Dr. Stork's paper dealt largely with the breast-fed infant, stressing the importance of breast nursing as a factor in reducing infant mortality. He also discussed the diet of the sixth to twelfth-month infant. Dr. Scholtz discussed the diagnosis and treatment of some of the common skin lesions.

A number of dogs and cattle have died of rabies in Riverside County recently, and the State Board of Health has quarantined against this infection.

SAN DIEGO COUNTY

San Diego County Medical Society (reported by Robert Pollock, M. D.)—On account of meetings of the National Society and our own State Medical Society during May, the only meeting of the San Diego Society was held May 9, when a discussion of the therapy of goitre was enjoyed. This was opened by papers by Thomas O. Burger and Lyell C. Kinney on the surgical and radiologic treatment, respectively. A liberal discussion followed.

John D. Hartley and Martha Welpton represented the San Diego Medical Society at the A. M. A. meeting in St. Louis. Martha Welpton, M. D,. was elected vice-president, and Marjory Potter, M. D., secretary of the Medical Women's National Association at its recent meeting at St. Louis. On May 18, O. G. Wicherski, county physician, delivered diplomas to the graduating class of the nurses' training school at the San Diego County General Hospital. The following members of the county society attended the Yosemite meeting of the State Society: H. A. Barclay, Charles W. Brown, F. A. Burton, J. D. Hartley, L. C. Kinney, T. Coe Little, E. Blanche Ramer, C. E. Rees, R. G. Sharp, and John Yates.

SAN FRANCISCO COUNTY

San Francisco County Medical Society (reported by Le Roy H. Briggs, secretary)—The Committee on Medicine met on May 2. The two papers presented were "A Plan of Intensive Treatment for Congenital Syphilis" by Hermann Schussler, and "Treatment of Acquired and Active Syphilis," by H. E. Alderson and G. H. Becker.

Medical Officers Organize—The San Francisco medical sector of the Association of the Army of the United States, authorized under the Act of June, 1921, has been perfected.

The Association, under the leadership of General Thornwell Mullally, has been in active operation for some months, and has been holding bi-weekly luncheons, at which lectures on important army topics have been given by experts.

To Colonel Bannister was assigned the task of organizing the medical sector of this army unit. By-Laws were adopted, and the following officers were assigned:

Col. W. B. Bannister, Surgeon of the Ninth Corps Area, chairman; Dr. Philip King Brown, vice-chairman; Dr. R. J. Dowdell, second vice-chairman; Major M. H. Eppstein, secretary; Dr. E. H. Angermann, treasurer.

Dr. J. Wilson Shiels, Dr. Morton H. Gibbons, Major J. M. Downs, Acting Division Surgeon of the Ninety-first Division, were appointed a Committee of Arrangements.

About sixty members of the old Ninety-first Division were enrolled as members.

California Academy of Medicine—The next meeting of the California Academy of Medicine will be held July 8, at a dinner at the Fairmont Hotel. The guest of the evening is to be Dr. Ernest Fuchs of Vienna. Dr. Fuchs is famous for his special work on the eye. He will address the Society on the subject of "The Eye and the Endocrines."

SANTA BARBARA COUNTY

Santa Barbara County Medical Society (reported by A. C. Soper, secretary)—The May meeting was held at the Cottage Hospital. Horace F. Pierce presented a case of Cretinism, and discussed the subject. "The Present and Future of Thoracic Surgery" was the subject of a paper by Samuel Robinson, which was discussed by C. S. Stevens, G. L. Chaffin, and H. J. Ullmann.

At the meeting of May 8, G. F. Farman read a paper on "Prostatic Massage." Mellinger's paper was on "Diphtheria of the Middle Ear," with special reference to virulent and non-virulent types of diphtheria bacilli.

The Society is engaged in an effort to establish a milk committee for the certification of milk in Santa Barbara County.

SANTA CLARA COUNTY

Santa Clara County Medical Society (reported by E. P. Cook, secretary)—The May meeting of the society was held in the society rooms in the Twohy building, San Jose. The meeting was in charge of Frank H. Paterson, councilor from the fifth district of the State society. Reports from the State convention were given by F. H. Paterson, C. M. Richards, M. W. Kapp, J. H. Shephard, and G. L. Barry.

W. Lester Wilson was accepted to membership by transfer from the Stanislaus County Medical Society.

New Home for the Stanford School of Nursing—The trustees of Stanford University opened the new nurses' home on the 31st of March, with formal exercises in the afternoon and a dance in the evening. The presentation of the home to the university was made by William Mayo Newhall, president of the board of trustees, and accepted by Ray Lyman Wilbur, president of Stanford University.

SONOMA COUNTY

Sonoma County Medical Society (reported by N. Juell, secretary)—The June meeting of the Society was held at Santa Rosa on the 8th, with ten members and two visitors present, and twenty-five members absent. Max Rothschild spoke on tuberculosis with special reference to modern treatment. J. H. McLeod and C. N. Mooney reported to the Society on the activities of the annual meeting of the California State Society at Yosemite.

The Society took necessary steps to secure the data provided for by resolution of the House of Delegates in order to increase the panel of our own members to practice industrial medicine.

STANISLAUS COUNTY

Stanislaus County Medical Society (reported by R. E. Maxwell, secretary)—The meeting of May 12 was held at a local hotel with President Fields in the chair. Members present were Mottram, Benson, Surryhne, Finney, Sturgis, Morgan, Bemis, McPheeters, Fields, Young, Reamer, De Lappe, McKibbon, and Maxwell.

Dr. Lester Wilson was given a transfer to the Santa Clara County Society. A. E. Julien of Turlock was elected to membership.

Dr. F. R. De Lappe, as chairman of the fee schedule committee, submitted a tentative report. A resolution was passed instructing the delegate to the State society to bring before the House of Delegates a recommendation that they appoint a State committee for consideration of a uniform fee schedule.

A paper by Dr. Polak upon "Abuse of Caesarian Section" was read by Dr. Surryhne.

New Associate Secretary—Following out the policies endorsed by the Council, the Publicity Bureau has appointed Dr. Howard H. Johnson full-time associate secretary of the State Medical Society.

Dr. Johnson's academic degree is from Miami, and his medical degree from the University of Cincinnati. His intern service was in the Cincinnati General Hospital, and he has since that time had a large and important experience, both in military and civil life, in medical administrative work. The co-operation of members of the State Society in making his services useful to the public and the physicians is requested.

EXTENSION WORK

The following additions have been made to the Extension Lecture courses offered by members of the State Society to local societies: (See November, February and March Journals for other lectures.)

A. GOTTLIEB, M. D.,
603 Consolidated Realty Building, Los Angeles.

1. **Physiotherapy in Orthopedic Practice:**
   The usefulness and mode of application of the various physical modalities in deformities acquired after accidents. Statistics and lantern slides.

2. **The Painful Foot:**
   A discussion of the possible painful foot conditions of local and remote origin. Prevention and treatment.

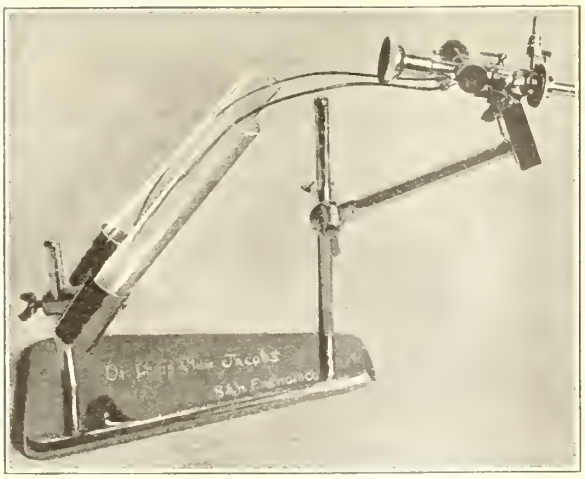
3. **Backsprains and Their Treatment by Physical Therapy:**
   Diagnosis of sprains by elimination and early treatment with physical and mechanical modalities in acute conditions. Physio-therapy of chronic backsprains.

4. **Metatarsalgia:**
   Etiologic factors, with special reference to the high-heeled shoe, which cause contracture of the "tendon Achilles" and leads to metatarsalgia. Prophylaxis and treatment. Lantern slide demonstrations.

5. **Orthopedic Principles in the Early Treatment of Injuries:**
   A discussion of immobolization vs. mobilization and preventive physiotherapy. Statistics and lantern slides.

Upheld by the Highest Court—The laws of Ohio relating to the practice of medicine and surgery require that all who engage in the treatment of the sick in that State, including chiropractors, shall first submit to examination by the State Medical Board in certain fundamental branches. The constitutionality of these laws has now been passed on by the Ohio Court of Appeals, the Ohio Supreme Court, and the United States Supreme Court, the last named having refused to review the decision of the Supreme Court of Ohio which, in an unanimous opinion, declared the laws constitutional and approved the rules and regulations of the State Medical Board. Thus the great principle for which the medical profession of this country has contended has been approved and upheld by the Appellate Court and the Supreme Court of one of our greatest States and, finally, by the Supreme Court of the United States. The opinion of the Supreme Court was handed down by Chief Justice Taft.

With characteristic effrontery, as is stated in current accounts of the situation, a rather large group of the chiropractors of Ohio announced, at a meeting in Akron, that they would "go to jail" before they would obey the law, even though that law has been upheld by the highest court of the land. Of course, the next move of these law violators and law defiers will be to get a little law of their own, if they can, at the hands of the next Legislature in Ohio. It is to be hoped that the members of that Legislature will be so informed that they will be convinced of the righteousness of the principle for which the medical profession contends, and it is to be hoped, too, that the public will be so informed as to their own interests in the matter as to demand from the Legislature that the chiropractor shall be no less well qualified in fundamental subjects than any other who is to be allowed to treat the sick. (American Medical Association Bulletin, April 15, 1922.)



A SIMPLE APPARATUS FOR HOLDING CYSTOSCOPE AND COLLECTING TUBES

There has always been a long-felt want for an apparatus that would aid the urologist in the collection of urine from the kidneys following cystoscopy. In the performance of various functional tests and certain X-ray procedures, there were difficulties encountered by many urologists who did not have access to some form of contrivance or apparatus that would hold the receptacles and cystoscope during the collection of urine following ureteral catheterization.

In recent years there have been placed upon the market various types of holders, which depend upon the principle of being clamped to the examining table, and then to the cystoscope. Most of them have been discarded as impracticable. The most commonly used table for cystoscopic work is the table with the end-leaf, which leaf can be lowered or placed at a horizontal plane parallel with the remainder of the table, enabling the patient to stretch out the limbs at full length; which position is usually employed in transferring a patient to the radiographic department for pyelograms.

For this reason I devised the following apparatus: There is a short metal base, from the anterior part of which is a perpendicular rod, attached to which is a horseshoe-shaped bar with two depressions, which tilt at various angles. This supports the cystoscope. The latter, swinging on this stand, has a ball and socket movement. At the posterior part of the apparatus there is another perpendicular rod, which holds two adjustable shelves for different size test-tubes. The attachments are all interchangeable, making it possible to sterilize the instrument or carry it in a compact mass, and to adjust the holder to any cystoscope and to any size collecting vessel.

After cystoscopy, it is customary to raise the lower leaf of the table, adjusting the apparatus thereon. When the apparatus is in this position, the weight of the cystoscope is evenly balanced, and aids in the comfort of the patient. This position permits the patient extreme laxity of movement, such as might take place in sneezing, coughing, or other respiratory movements.

LOUIS CLIVE JACOBS.

BOOK REVIEW

Lessons on Tuberculosis and Consumption for the Household. Showing how to prevent tuberculosis, how to recognize its first symptoms, how to win back health. By Charles E. Atkinson, M. D. Illustrated. N. Y., Funk & Wagnalls Company. 1922.

It is hard to cover just the ground that would satisfy everyone in a book intended for the laity. Many of them want information on points of no importance, and others with peculiar prejudices wonder that their pet ideas are not given more attention. On the whole, this book has sailed a safe and sane course on the general principles, and will serve as a reference book in answering, by some description, most of the questions that may be asked about method. The Scotch verdict "Not proven" ought to be used a little more freely in reference to a great many methods of treatment, particularly regarding immunization and the value of vaccines.

Questions involved in the influence of climate are so largely matters of opinion, and are of so little importance as compared to opportunities for rest with good food and peace of mind, that all these secondary elements ought to be considered in a purely comparative way. It is easier to live out of doors in a warm place than a cold one, and it is pleasanter to live where it is reasonably dry. Where people can afford the luxury of so-called ideal climates it is all well and good, but the less said about it to the great mass of people the better. It seemed also that the discussion on sun baths is open to criticism, and that the prevailing opinion is that they had better be confined to surgical cases.

P. K. B.

DEATHS

Parker, John. Died in Salinas, May, 1922. Was a graduate of Medical College of the Pacific, 1874. Licensed in California, 1876.

Hutchins, Frederick. Died May 4, 1922. Was a graduate of Dartmouth Medical College, N. H., 1870. Licensed in California, 1883.

Hart, Lasher. Died in Los Angeles, May 30, 1922. Was a graduate of Syracuse University, New York, 1903. Licensed in California, 1910, and a member of the Medical Society, State of California.

Sterilization Law Held Illegal—The Supreme Court of Indiana has declared invalid the law-making provision for the sterilization by vasectomy of criminals, idiots, rapists, and imbeciles, whose mental and physical condition would make procreation inadvisable. It is particularly refreshing to note that the court did not rule upon the various controversial points connected with the practice of vasectomy, but based the decision upon the broad grounds of the Fourteenth Amendment to our Constitution.

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ORIGINAL ARTICLES

RESPONSIBILITY FOR STATEMENTS AND CONCLUSIONS IN ORIGINAL ARTICLES

The author of an article appearing in the JOURNAL is entirely responsible for all statements and conclusions. These may or may not be in harmony with the views of the editorial staff. Furthermore, authors are largely responsible for the language and method of presenting their subjects. All manuscripts will be carefully read, but editorial privileges will be exercised only to a very limited extent. It is believed that the manner of presentation of any subject by any author determines to no small degree the value of his conclusions. Therefore, both the author and the reader, in our opinion, are entitled to have the subject as presented by the author as little disturbed as possible by the editors. However, the right to reduce or reject any article is always reserved.

NON-DYSENTERIC AMEBIASIS *

By ALFRED C. REED, M. D., San Francisco.

The term "amebiasis" was coined in 1904 by Musgrave and Clegg in Manila to describe a "state of infection with amebas," and we are extremely fortunate here today in having with us in person one of the originators of this term, Dr. Musgrave, who has had the rare privilege of observing the development in this country and abroad of work stimulated and begun by himself twenty years ago. Man is subject to infection by at least five varieties of ameba. Of these we are convinced of pathogenicity in the case of one only—Entamœba histolytica. Kofoid and his colleagues have described as Councilmania lafleuri, a species of ameba which they believe to be pathogenic and to have been confused formerly with Entamœba coli. At present this species is under judgment, and its establishment as a new species is open to serious question, so that we can speak with unanimous authority of only one ameba, E. histolytica, whose pathogenic properties have been clearly demonstrated. This species alone, therefore, enters into the present discussion.

Amebiasis is widespread in the human race, some authorities estimating that as high as 10 per cent of the population of the globe is infected. An examination of 2300 overseas men and 576 home service men by Kofoid and Swezy led these workers to conclude that carriers of ameba in the United States were greatly increased by the return of the soldiers, and that carriers are more numerous than was expected among the normal population. Giffin, as early as 1913, in 1700 persons examined in the Middle Northwest, found 148 infected with E. coli, and 79 with E. histolytica.

In California there is evidence of a surprisingly high incidence, as indicated by numerous case reports and surveys. The sources of the endemic distribution in California are chiefly these:

1. Immigration from the Orient, especially of Filipinos, Chinese, Japanese, and East Indians.
2. Immigration and transient labor from Mexico.
3. Tourist travel from California to Asia.
4. The army demobilization.
5. Trade routes centering in California ports.

As in the case of other typically tropical diseases, so here, we have in California special problems and special dangers which require immediate attention.

While until recently considered predominantly a tropical affection, amebiasis is now known to be cosmopolitan and to invade practically every country of temperate climate as well as the tropics. There seems, however, to be a clinical difference in that dysentery is by far a more striking feature in the tropics than in higher latitudes. The common use of the term, tropical dysentery, as a synonym for amebic dysentery, is an illustration of this. It is important to keep clearly in mind that dysentery is merely a syndrome and not a specific disease. By dysentery we mean frequent bowel movements, containing blood and mucus and associated with pain and tenesmus. Dysentery is due to a large variety of causes of which ameba is only one.

An understanding of amebiasis from the clinical point of view requires an exact knowledge of its pathology and of the life cycle of the ameba. Under no circumstances are motile amebas in the dejecta infective for human beings. Their viability is too feeble and they probably never survive passage through the human stomach even if they get this far. Infection of man occurs solely through the agency of cysts. The vectors concerned in this transmission are chiefly water and flies. The cysts ingested by flies are found fully potent in their feces. Dependence on cyst-transference explains why amebiasis is invariably endemic and never epidemic in its incidence.

The cysts are ingested with food or drink by man and pass unchanged through the stomach. In the small intestine the cyst wall is dissolved and probably a single small quadri-nucleate ameba is released. This soon subdivides into four new

* From the Department of Medicine, Stanford University Medical School.

amebas which are carried by the intestinal flow to the colon.

Many authors have described invasion of the small intestine, but almost invariably the colon alone is attacked and the sites of election are the flexures, cecum and rectum. Dobell describes one method of invasion. In this the amebas are seen to congregate in large numbers on the surface of the healthy mucous membrane and gradually erode it by the secretion of a cytolytic ferment which dissolves the epithelial cells. The amebas soon lie in a pool of liquefied epithelium. Dobell states that they do not dislodge the epithelial cells mechanically or burrow between them. They do, however, according to this author, frequently invade the tissue through the crypts of Lieberkuhn. This is a stage of superficial erosion only and while the adjecent capillaries are dilated there is no true tissue reaction.

This erosion may develop into the characteristic type of amebic ulceration. The cytolytic action of the ameba here seen, gives the occasion for the name histolytica and is the one and only definite indication of the production by the ameba of an exotoxin. The ameba lives in direct contact with healthy tissues and not in the necrotic mass resulting from its activities.

Dobell describes the histologic picture as follows:

There first occurs a histolysis of the tissues in direct contact with the ameba and then a dilatation of the nearby capillaries with succeeding thrombosis and round-cell infiltration. Finally a necrosis of varying extent takes place. The typical amebic ulcer gives the appearance of a purely local lesion, with very little if any tissue reaction. The body tissues tend to regenerate whenever and wherever the amebas cease their activity or are removed by specific treatment. Some scar tissue is formed as well as new replacement tissues. The amebas are present in the lesions in vast numbers, in a large motile form. It is probably here that reproduction takes place by simple fission. A certain number of these large amebas, the ones destined for race propagation in a new host, leave the tissues and pass into the lumen of the colon where they are reduced in size and extrude all foreign material and food masses. Then as small, round, clear and very sluggish forms, they proceed to encyst by merely secreting a transparent thin coating. These cysts are carried out by the intestinal contents and their single nuclei subdivide twice, giving an ordinary maximum of four nuclei in the cysts seen in the stools.

Cyst production is not a constant activity of an ameba colony. It does not accur in amebic abscesses as in the liver or brain. Nor does it occur with any regularity in intestinal lesions. The biologic reasons for this are obscure but doubtless have to do with the lack of drainage of necrotic material, giving in general thereby an absence of any means for propagating an extension of the infection to a new host, and with the fact that the ameba under such conditions is not in an optimum environment for both forms of reproduction.

Under conditions favorable for its growth and reproduction, the ameba exists in a free-moving form, while under less favoring environment and when preparing for departure from its human host, it encysts in a resistant resting form. We have no evidence that under any circumstances E. histolytica can inhabit the human colon as a harmless commensal. As the infection increases in quantity and virulence, the clinical picture approaches that of dysentery. On the other hand, as the infection is less massive and vigorous, the clinical picture is that of non-dysenteric amebiasis, that is, of a carrier or chronic state. As various authorities have pointed out, granted an amebic infection, it is evident that this chronic or non-dysenteric state is the optimum both for parasite and for host. Non-dysenteric amebiasis is much more prevalent in temperate climates while dysentery and abscesses are more frequent in hot climates.

Several comments arise out of this survey of the pathology and life history.

1. All forms of amebiasis, in our present state of knowledge, pre-suppose and require that primary form of intestinal infection just described.

2. The ameba can invade the blood and lymph stream with the utmost ease. This is further proved by the occurrence of liver and brain abscesses. But thus far, no portal of entry has been proved except the one noted through the intestine.

3. While the ameba gives evidence of secreting a histolytic exotoxin, no other evidence of exotoxic action has been clearly demonstrated.

4. All clinical symptoms resulting from the presence of ameba in the body must be due to the following mechanisms:

(a) The effect of local pathologic changes in the intestine or other tissues directly invaded by the ameba.

(b) Absorption of amebic exotoxins of a more or less hypothetic nature.

(c) The absorption through amebic lesions of virtually parenteral protein or bacterial products. This latter is probably the explanation for the inflammatory reaction and enlargement of lymphatic glands draining regions of amebic invasion.

(d) Reflex effects resulting from the presence of amebas in the colon or elsewhere. If an inflamed appendix can be responsible for a reflex constipation, it is equally conceivable that an amebic lesion can cause intestinal and digestive disturbances through a reflex mechanism.

As seen in California, amebiasis in the great majority of cases is of the non-dysenteric type; that is, the infection exhibits an approximate balance between host and parasite and is apt to manifest itself in symptoms which are not a direct result of the lesion in the intestine. Almost any variety and degree of neurasthenia, physical depression, constipation, loss of weight, anemia, digestive troubles, vague aches and pains, and indefinite ill-health may be associated with amebiasis and disappear when the ameba is eliminated. In fact the symptoms may be so diverse, bizarre and unexpected that amebiasis is the last possibility to

be considered. This type of symptomatology is prevalent in California. In view of these considerations the following clinical rules may be drawn with conservatism:

1. Amebiasis is prevalent in California in non-dysenteric form.
2. Every patient suffering from gastro-intestinal symptoms should be investigated for the presence of ameba.
3. Every patient in whom the diagnosis is obscure or incomplete should be investigated for ameba.

Identification of ameba in the stools must include at least six consecutive daily specimens, including formed as well as fresh liquid stools, and must be conducted by a competent parasitologist.

Pathogenic amebas, that is, E. histolytica, have been described with certainty only in the intestine and in secondary abscesses as in the liver, lungs and brain. Reports of their occurrence elsewhere in the tissues of the body are subject to more or less criticism and are either inaccurate or premature at the present time. By many writers pathogenic amebas have been described in the urine and urinary bladder. Some few of these reports may be correct but the majority cannot be studied without the growing conviction that inflammatory or body tissue cells have been confused with amebas. We must recall that the leucocytes of normal blood have an ameboid motility and a cytology distinguishable with the utmost difficulty in fresh preparations from motile pathogenic amebas. This point was called to my attention by Herbert Gunn, who has been able to demonstrate the close similarity of fresh leucocytes with various wandering tissue cells, pus cells and amebas. Error is difficult to exclude. Always study of the free-moving forms must be amplified by identification of cysts when they occur, description of the nuclear structure and study of stained preparations before a valid opinion can be given. These criteria have not been met in the great majority of cases where amebas have been reported present in the urinary tract and elsewhere in the body outside the points of recognized incidence.

The same criteria may be brought with equal force against amebas reported in any tissue, as in the skin for instance. In the case of bile infections, a final word cannot be given. Gunn has had cases, one of which he has reported, where intestinal amebiasis cleared temporarily after removal of the gall bladder which apparently contained motile amebas. Permanent cure was prevented possibly by amebic infection in the bile ducts. It has been supposed that ameba would not live in the presence of bile so here, too, further light is needed.

There is little question that many persistent cases of amebiasis depend for their chronicity on an amebic focus in the appendix. It is probable that removal of the appendix would cure many such cases just as effectively and much more quickly than appendicostomy and colon irrigation through the stump. Skin infections have been described, partaking of the nature of a phagedena and associated with sinuses from a deep amebic abscess as in the liver. It is conceivable that amebas might infect cutaneous tissue by this method but the proof of it is not very definite.

The problem of the relations of ameba to the lesions of arthritis deformans, Ely's second great type of arthritis, has received considerable study in the past year at the Stanford Medical School. For several years claims have appeared in literature that ameba was related to this hypertrophic type of chronic osteo-arthritis. In 1906 Hunkin and Long, in San Francisco, attempted to show such a relationship. Since then John Barrow of Los Angeles has claimed that the relationship existed.

In the late summer of 1921 Barrow found E. histolytica in the stools of one of Ely's patients who suffered from hypertrophic arthritis of the spine. Relief or improvement not having followed the usual methods of treatment, this patient was given a course of specific amebic treatment with an immediate and remarkable clinical improvement. One relapse of arthritic symptoms was accompanied by a recurrence of cysts in the stools and the symptoms disappeared with a continuance of treatment. A second relapse was not accompanied by any evidence of intestinal amebiasis but improvement again followed resumption of amebic treatment, and has continued.

About this time Ely removed the head of a femur for this type of arthritis. Sections from the necrotic areas of this bone were stained with a standard iron hemotoxylin method and showed cellular bodies identified as E. histolytica. These bodies were abundant near the periphery of the necrosis and especially abundant around the capillaries. Their identification as amebas has not met with unanimous confirmation from those who have examined the sections. They were studied by Kofoid, who has already this afternoon detailed his conclusions about them. In an earlier note Kofoid and Swezy make the following statement:

"A portion of the head of a human femur, removed by operation in a case of arthritis deformans, reveals a pure infection of amebae about the characteristic lesions in the bone. No stained bacteria have been found in our examination. . . . The organisms interpreted by us as amebae are unlike known normal or pathologic tissue cells. They have the clear nuclear structure of Endamoeba dysenteriae (Councilman and Lafleur) found in tissues about amebic ulcers in intestinal amebiasis. Their nuclei are unlike those of endamoeba gingivalis."

Ely, Wyckoff and I have continued investigation of these lesions and have examined the stools in twenty cases of Type II arthritis in the clinic service. Of these only one showed histolytica. This patient was put on intensive treatment for amebiasis with the result or accompaniment that his arthritis became distinctly worse and remained worse. Cysts had not reappeared in his stools within two months after stopping treatment but physiotherapy had to be resumed to relieve his pain.

During the same period I saw seven other cases

of Type II arthritis. One only of these, the case already mentioned as the original in this series, harbored Entamoeba histolytica. One of these which had no evidence of amebiasis was put on moderately severe amebic treatment none the less and received immediate improvement which has lasted for some two months. I believe the explanation lies in the free elimination secured by the treatment and is along the line frequently noted of improvement following the use of colon irrigations and a diet designed to decrease putrefactive changes in the bowel. A second case was infected with an ameba which Kofoid diagnosed as Councilmania. The amebiasis was cured by specific emetin treatment and the clinical improvement was marked and has lasted some three months. Such a so-called therapeutic test as this seems to me worthless, however, as showing any relations between ameba and arthritis, for the same reason as stated above.

It is evident that bony changes in hypertrophic arthritis will outlast removal of the specific cause whatever that may prove to be, and it is more than possible that the symptoms of arthritis would persist likewise after removal of the specific cause. Effective treatment probably must be instituted in the early stages of the bone pathology and preferably on a preventive basis. Immediate improvement in the symptoms of arthritis after treatment with emetin preparations would in no sense argue for an amebic cause for the arthritis, but rather for immediate removal or subsidence of some focus of toxic absorption in the intestine. This is in line with mature clinical judgment.

Settlement of the present question of the causative relationship of the ameba will depend not on therapeutic experimentation but on demonstration of definite association histologically between ameba and bone lesion, and the experimental production specifically of such lesions.

It might be assumed that a comparison of the rate of incidence of ameba in Type II arthritis cases as compared with the rate of incidence at large would give conclusive evidence for or against the thesis that ameba is the cause of osteo-arthritis. But it is to be remembered that such statistics are at best only of inferential value and what value they possess is strictly proportioned to their quantity. Definite pathologic evidence alone would satisfy the requirements of the case.

This investigation is tedious and slow in its development and a considerable time will be required to affirm or disprove the suggestion that ameba is related to arthritis. Ely finds alveolar infection almost universal in Type II arthritis, yet the bone lesions seem without question to be non-bacterial in origin and, moreover, the E. gingivalis, so frequently associated with abscesses and granulomata in the dental area, has so far not been proved pathogenic. In a recent case of intestinal amebiasis, we examined the carious bone resected for the removal of deep dental infection. In the dental abscesses and granulomata E. gingivalis was abundant but no ameba-like cells of any sort were found within the bone itself. Nevertheless we are not yet prepared to state positively that the alveolar process can never be a portal of entry for pathogenic amebas.

Clinical experience thus far is too small to warrant statistical conclusions and for the purpose involved here, the importance of statistics is certainly minimal. We know that in other regions ameba may leave certain areas and move on or disappear, and the same factor doubtless would play a part if amebic bone infection were to occur.

There is, on the other hand, no evidence that amebiasis ever terminates spontaneously in the absence of specific treatment. Our personal impression is that the matter of bone invasion by ameba requires adequate investigation and that the suggestive data at hand amply justify further study. Lacking a bacterial cause for arthritis deformans, we can with logic seek a protozoal cause. Barrow believes that protozoan infection is present in 100 per cent of Type II arthritis. It will be necessary to demonstrate motile amebas in the fresh bone tissues, as cysts are not to be expected in such a location. As E. histolytica has not yet been successfully cultivated, experimental lesions are extremely difficult to secure at present.

While it is not certain that the intestinal tract is the sole portal of entry for pathogenic amebas, still thus far no other has been demonstrated. Treatment of intestinal amebiasis, therefore, might react favorably on a bone lesion in a non-specific manner by decreasing absorption of bacterial or protein products through intestinal ulcerations. The field of investigation is large and many unknown factors are doubtless involved. It is possible that a food deficiency analogous to a scorbutic deficiency may determine the bony localization of a protozoan parasite. We are convinced in any case that the inquiry must proceed along pathologic and experimental lines rather than in the hope of data from therapeutic or statistical methods in well-established cases of arthritis.

An unusual case of amebiasis was seen recently through the kindness of W. H. Barnes of San Francisco who reported it at the April meeting of the Stanford medical staff, and who intends to publish the detailed case report after longer observation.

A young woman, who had served as an army nurse, had suffered for five years from attacks of unusually severe asthma. During the same period she had recurring periods of diarrhea and sometimes of dysentery. No cause being found for the asthma, the stools were finally examined and E. histolytica was found in heavy infection. Specific treatment resulted in the temporary disappearance of the ameba and also in immediate relief of the asthma. Recurrence of ameba in the stools for a considerable period were concomitant with recurrences of severe asthma, which each time were relieved by specific treatment for amebiasis. Finally a more severe course of treatment was instituted with the hope of entirely eradicating the ameba, and in the course of the treatment she developed a severe arthritis. This is her status at present and Barnes' future report will record the end results.

Ordinarily asthma in the course of amebic infection is not affected by treatment for the latter.

The striking coincidence of the asthma and the intestinal symptoms and their common relief by specific amebic treatment are remarkable. The relation, if any, of the arthritis to the other conditions present has not yet been suggested.

In the treatment of amebiasis we believe that ipecac and its alkaloids alone are of value. Emetin hypodermically and bismuth emetin iodide by mouth are the only two preparations used, with the occasional addition of ipecac root. Neosalvarsan is added on the strong recommendation of Herbert Gunn who has found it to increase the efficiency of treatment. The bismuthous emetin iodide is given in powder form in gelatin capsules, three grains at night, if necessary preceded by opium. This drug is difficult to take and sometimes cannot be used in full dosage. Colon irrigations and oil enemas are used where there is evidence of marked colitis. Under like conditions the treatment is initiated by a short course of ipecac powder in massive doses. Other drugs are used solely for symptomatic indications, as for the benefit of digestion or the relief of colitis which may and often does outlast eradication of the ameba. Synthetic emetin is under trial at the suggestion of Barrow.

Treatment should be intensive and repeated milder courses administered in case of recurrence of cysts in the stools. Some cases have received definite benefit by resumption of mild treatment for purely symptomatic reasons when no cysts could be discovered. Alcresta ipecac is used at times for this purpose. It is mild in action, and much weaker than other ipecac preparations named, probably due to its admixture with kaolin.

The chief criterion of cure of amebiasis is the absence of cysts from the stools for a period of at least three months after termination of treatment. Examination for cysts, as already stated, requires at least six consecutive specimens on different days, including formed as well as fresh liquid movements.

In our investigations at the Stanford Medical School the stool examinations have been under the direction of Harry A. Wyckoff, clinical pathologist at Stanford Hospital.

(350 Post Street)

USING MEDICAL TERMS BEFORE PATIENTS

During the days when frock coats and whiskers were part of the physician's stock in trade, it was quite the custom for physicians to bewilder and frighten the patient by discussing his illness in Latin or in technical terms the patient could not understand. This custom should have disappeared with the frock coat, but it has not entirely done so.

The practice is and always was a deplorable example of poor taste, and now it is no longer legally safe. Many patients are sufficiently acquainted with the technical terms to understand, while others misunderstand and cause themselves worry and unhappiness.

In a number of court actions recently, physicians have been required to substantiate thoughtless statements made at the bedside, and it is likely that evidence of this kind will play a more and more important role in malpractice suits as time goes on.

A PLAN FOR THE INTENSIVE TREATMENT OF CONGENITAL SYPHILIS

PRELIMINARY REPORT

By HERMANN SCHUSSLER, JR., M. D., San Francisco.

The average physician, more particularly the general practitioner, has always considered the treatment of congenital syphilis as a most unsatisfactory part of his work. While many patients, especially young infants, show a strikingly clinical improvement under the influence of mercury alone, yet the Wassermann reaction is hardly ever made negative even when this drug is long and faithfully continued. The late case, with interstitial keratitis or a bone lesion, is generally looked upon as essentially incurable. Furthermore, many physicians feel that intensive arsenical therapy is either too difficult, too dangerous, or too painful to be used in infants and young children, except perhaps in the hands of one highly trained, and with all the facilities of the modern hospital at his disposal.

Recently Fordyce and Rosen, and Jeans have presented evidence that by following out in congenital syphilis a systematic plan of treatment similar to that used in adults, remarkable results can be obtained. Infants were apparently cured within a year, and most older children in two years. The methods described by these writers are not only efficient but safe, and simple enough to be carried out by anyone with medical training.

For the past two years we have been gradually improving, simplifying, and systematizing our routine plan of treatment for congenital syphilis at the Children's Clinic of Stanford University Medical School. Our aim has been to develop a method which the general practitioner can apply in the office or the home with a minimum of apparatus and trouble, with little or no discomfort or risk to the patient, and with the assurance that all the advantages of modern intensive anti-syphilitic therapy have been brought to bear upon the case. The method as it now stands may require further changes in the future, but we feel that the work has progressed far enough to justify this preliminary report.

General Plan of Treatment—When the Wassermann report comes back positive, the parents are carefully instructed as to the nature of the infection, the prognosis to the child with and without treatment, and the importance of regularity in attendance and of following out instructions to the letter. Wassermann tests are done on the parents and their other children, and the importance of treating the mother during future pregnancies is emphasized. The whole-hearted and faithful co-operation thus secured has contributed markedly to our good results.

If no contra-indication is found in the physical examination, the following course of treatment is begun at once:

1. Three intravenous injections of neoarsphenamine are given at 48-hour intervals.
2. Three mercurial inunctions are given every week for eight weeks.

3. Three more neoarsphenamine injections are given at 48-hour intervals.
4. Mercurial inunctions are given as above for four weeks more.
5. A rest period of four weeks is permitted, at the end of which a Wassermann test is done.

It will be noted that the above schedule covers a period of about four months. It is repeated regularly until the Wassermann test is negative, after which one more course is given with step 3 omitted. Then all treatment is stopped, and the Wassermann is repeated every six months for three years. If all are negative, and no clinical evidence of the disease has appeared, the patient is considered as probably cured.

Perhaps a longer observation period would show some late relapses, but we believe that three years are sufficient for all practical purposes. We have given up the provocative Wassermann reaction as unreliable, and feel that routine spinal puncture before dismissal is not necessary in children.

Sodium iodide is given almost continuously to all patients over one year old, being omitted and a tonic of iron and cod liver oil substituted during the rest periods.

If the patient has an active or open lesion, the initial series of neoarsphenamine is increased to six injections on alternate days, the rest of the course being as usual. This first course is considered the most important, and it should be made intensive. In weak athreptic infants, the first arsenical series may be preceded by a week or two of mercury rubs.

Spinal puncture is done (1) if the central nervous system is clinically involved; (2) if the Wassermann reaction is very resistant to treatment; (3) in cases with mental deficiency, and (4) at the time of the first negative blood Wassermann, if involvement of the nervous system has ever been suspected. Intraspinal treatment in children is rarely used and is not recommended for general practice.

Adenotonsillectomy and extraction of diseased teeth should be done whenever indicated, not only because the child's general condition is improved by the operation, but because the clinical and serological response to treatment often becomes far more rapid and satisfactory after the removal of focal infections. The first rest period is usually the best time for such surgical measures.

Dosage—The dosage of neoarsphenamine varies with the age, weight, arsenical tolerance, and general physical condition of the patient. It is much higher, in proportion, than the doses commonly used in adults. We have never seen a serious reaction from it when given as advised in this paper.

The ampules are made in six sizes, and the following table indicates the usual weight-range for each size, as well as the amount of water generally used to dissolve the dose:

Dose	Weight-Range	Water
0.15 g.	Under 12 pounds	0.5 cc.
0.3 g.	12-22 pounds	1. cc.
0.45 g.	22-35 pounds	1.5 cc.
0.6 g.	35-50 pounds	2. cc.
0.75 g.	50-70 pounds	2.5 cc.
0.9 g.	Over 70 pounds	3. cc.

Of course, in any case whose arsenical tolerance is doubtful, the initial dose should be about half the usual one for the patient's weight.

The mercury is prescribed as flexible capsules, each containing 4 g. of the official 50 per cent Unguentum Hydrargyri. Parents and children are instructed to rub for 30 minutes or until the skin no longer feels greasy, after which the excess may be removed with benzine and cotton. Infants under 20 pounds are given two inunctions a week of half a capsule each, using alternately the front and back of the body from neck to knees. Children between 20 and 50 pounds get half a capsule three times a week, the areas used being (1) chest and abdomen, (2) back, and (3) both legs from hips to ankles. Children over 50 pounds get a whole capsule three times a week, using the same areas. Older children do the rubbing themselves, except when the back is used.

Sodium iodide is prescribed in saturated solution, one or two drops for each year of age three times a day after meals, given in a full glass of milk. The initial dose is often smaller as a precaution, although we have seen no iodism. Larger doses than those given above are probably never necessary, even when gummata are present.

Half a teaspoonful of powdered sulphur at bedtime every night is an efficient prophylactic against mercurialism, as well as a useful treatment for this condition when it occurs. In the rare cases in which a gingivitis developed, the sulphur cleared it up rapidly, although the mercury was continued without interruption. When mixed with a little syrup, children take it without objection.

Neoarsphenamine Technique—We use a modification of Schamberg's technique. A 2 cc. glass syringe, an ordinary Wassermann needle, and a half-inch, 25 gauge hypodermic needle comprise all the apparatus required. After sterilization, the specified amount of boiled fresh *tap* water is drawn into the syringe, and the larger needle attached. Distilled water, and larger amounts of water than those given in the table, are unnecessary. The small tip of the ampule is filed and knocked off, the powder shaken to break up lumps, and the cooled water injected. The finger-tip, wiped off with alcohol or covered with a sterile finger-cot, is placed over the small hole, and the ampule is well shaken until solution has occurred, usually in less than one minute. The solution is now drawn into the syringe from the inverted ampule. The large needle is then replaced by the smaller one and the injection given *at once* to prevent oxidation.

Children of over six years usually have good veins at the bend of the elbow. In all others the external jugular is probably the best, although young infants often have good scalp veins which may be used. We no longer use the fontanelle, and do not recommend it. Crying, or digital pressure above both clavicles simultaneously, will distend the jugular and scalp veins nicely. For the former, the head should be hyperextended and rotated, with a pillow under the shoulders. The skin is washed with 95 per cent alcohol, as 70 per

cent leaves it slippery. The distended vein and overlying skin are drawn taut by the operator's left thumb. The small needle is introduced well into the vein by a quick stab, which is practically painless. When the blood enters the syringe by gentle traction with the plunger, and the point is known to lie free in the vein, the digital pressure is released and the injection is made slowly, taking about one minute. When the syringe is empty, 0.5 cc. of blood is aspirated and reinjected, to rinse out the last drops of solution and prove that the needle was in the vein throughout. Obviously, the child must be prevented from struggling during the treatment. Most children are quiet after their first experience.

This technique is no more difficult than that required for other intravenous medication. It takes less than five minutes to give a treatment, and the same vein often may be used repeatedly. The small syringe and fine needle make these intravenous injections simple even in the smallest vein. We have never had to cut down on a vein, and have given up rectal and intramuscular administration entirely.

Comment—The dosage and intervals recommended above have been reached very gradually and they appear to be the most satisfactory ones for general use. Whether children tolerate neoarsphenamine better than adults, or whether the customary dosage in adults is too small, is not certain. However, our dosage is safe, and has been exceeded on several occasions without untoward results. In view of the low toxicity, high efficiency, and ease of administration of neoarsphenamine, we feel that it should entirely replace arsphenamine in the treatment of children. It is extraordinary to one accustomed to giving 0.6 g. of this drug once a week to an adult to see a child weighing 35 pounds taking the same dose every other day for six doses with no sign of a reaction. Reactions, other than a little vomiting at times, are practically eliminated by omitting luncheon, making breakfast and supper light, giving a mild laxative the night before if the child has been constipated, and giving the injection between 11 a. m. and 3 p. m.

The 48-hour interval recommended by Ormsby is safe and far more efficient than the longer intervals in common use. In following somewhat similar methods we have not observed anything suggesting a cumulative toxic effect.

The contra-indications to the various drugs employed are the same in children as in adults, but are comparatively rare. None have occurred in our series. The occasional appearance of a trace of albumen and a few hyaline and granular casts in the urine during the administration of the neoarsphenamine may be disregarded, as they always disappear rapidly after the last injection, and do not indicate nephritis.

Inunction is the method of election in giving mercury to children. Mouth administration clears up lesions and increases weight, but does not affect the Wassermann reaction and also has the other well-known disadvantages. Ramsay and Groebner have shown, by quantitative analyses of the urine for mercury, that absorption after proper inunctions was greater than after any other method which they tested. They also showed that daily inunctions are unnecessary, and since we have adopted the present plan of two or three rubs a week, no patient has failed to carry out his part of the program faithfully. We have seen no salivation, diarrhea, or dermatitis.

RESULTS AND CONCLUSIONS

While a number of our patients have been rendered Wassermann-negative, and all have shown marked clinical improvement, as evidenced by disappearance of lesions, gain in weight and strength, and better work in school, yet we feel that a statistical presentation of our results should be postponed until a longer observation period has elapsed. The hope of the congenital syphilitic lies, we believe, in more systematic planning of his treatment, in its continuance beyond the first negative Wassermann, and in the use of larger and more frequent doses of neoarsphenamine than have heretofore been customary. In any case we are more than satisfied with the progress our patients are making, and feel that our plan of treatment, while extremely simple and easily mastered by anyone, is as effective and as well borne as any that has heretofore appeared in the literature.

(391 Sutter Street)

Resolution on Chiropractic Training of Disabled Soldiers—Abstract from Minutes of the Seventy-Third Annual Session of the A. M. A.

"Whereas, The St. Louis Medical Society on May 16, 1922, by Memorial and Resolutions vigorously protested against the approval by the U. S. Government of the School of Chiropractic as a means of vocational training for disabled ex-service men, and

"Whereas, It appears that more than 250 ex-service men from all parts of the country, seventy of whom represented the Ninth District, composing the States of Missouri, Iowa, Kansas and Nebraska, are now enrolled in one Chiropractic School in this district with the sanction and approval of the U. S. Government; therefore, be it

"Resolved, That the House of Delegates of the American Medical Association, in annual session assembled, representing over 89,000 legally qualified physicians, adequately trained in the arts and sciences (the only foundation for the recognition, control and prevention of disease), approves the sentiments expressed in the Memorial and Resolutions adopted by the St. Louis Medical Society, which have been submitted to this House, and hereby directs that the proper officers of the American Medical Association memorialize and petition the Federal Government, particularly those officers charged with the responsibility for the rehabilitation of disabled ex-service men, and to take such action in the interest of the welfare of all the people, and also for the protection of those who honestly desire to administer to the sick, to the end that the ex-soldiers seeking vocational training, which will fit them for administering to the sick and aiding in the recognition, control and prevention of disease, shall, at least, meet the requirements and shall receive such adequate training as is defined in the classification of medical schools of the American Medical Association, known as Class A, or acceptable medical schools—a standard which is approved by all right-thinking people moved by a desire for public welfare."

THE DIPHTHERIA PROBLEM

By W. W. ROBLEE, M. D., Riverside, California

Notwithstanding a fairly complete knowledge as to etiology, methods of immunization and specific treatment, diphtheria continues to take a serious toll of lives and is responsible for great economic waste.

Number of cases of diphtheria in New York City, 1920 14,166
Number of deaths from diphtheria in New York City, 1920..... 1,045
Number of cases of diphtheria in New York City, first six months, 1921..... 10,722
Number of deaths from diphtheria in New York City, first six months, 1921..... 611
Estimated cost for first six months, 1921.....$581,825
Number of cases in California, 1921..... 9,448
Number of deaths in California, 1921..... 637
Number of cases last two weeks in January, 1922. 637
Total deaths annually in United States about.....15,000

Prior to 1895, when antitoxin came into general use, the case rate was variously estimated at from 150 to 200 per hundred thousand. Many factors render it difficult to arrive at accurate figures, but apparently the disease incidence has been very little reduced during the past decade.

The mortality rate in pre-antitoxin days was 32 per cent.

The mortality rate at present is but 8 per cent.

This gives a mortality reduction of 75 per cent, or, in other words, antitoxin saves 45,000 lives annually, but the disease incidence remains stationary.

The object of this paper is to call attention to certain proven procedures, whereby disease incidence, in relation to diphtheria, may be greatly reduced. In fact, it is not an over-statement to declare that clinical diphtheria could be wiped out if universal application of these methods could be secured.

Two Necessary Factors in Diphtheria Control:

1. The spread of infection by:
   (a) Carriers:
      1 per cent of population, 4 to 8 per cent of children have either virulent or avirulent bacilli.
   (b) Missed clinical cases:
      (1) Pharyngeal.
      (2) Nasal.
      (3) Laryngeal.
2. Detection of those non-immune by:

   Schick Test. This was published in 1913 and used extensively by Behring in Germany eleven years ago and by Park & Zingher in New York for the past nine years. Over 100,000 children have been tested in New York during that period and numerous smaller groups elsewhere.

Technique of Schick Test:

1/50 minimum lethal dose of diphtheria toxin for a 240 gram guinea pig in a given quantity of salt solution, usually 0.1 cc., is injected intradermally, preferably on the anterior surface of the forearm and the same amount of the toxin heated to 75 degrees C. for ten minutes is given in the other arm. Dilutions must be freshly prepared each day.

The Toxin Reaction:

"Represents the irritant action of a specific toxin upon tissue cells that are not protected by antitoxin." It therefore shows a lack of immunity. The control test is for the purpose of detecting those who are sensitive to the proteins of the meat extracts and peptones used in the culture media and to the bacillary proteins that cannot be eliminated by any known method. In 24 to 72 hours a red area from 2 to 6 cm. in diameter develops; this is at its height on the fourth to fifth day and gradually fades, leaving a slightly scaly, brownish pigmentation which may persist for several weeks. Pseudo reactions develop quickly and are at their height in 24 hours. They disappear in three days.

Defined as: (1) Positive; (2) Negative; (3) Positive combined, when both the toxin and control react; (4) Pseudo or pseudo-negative, a protein reaction.

There are no constitutional effects or painful local reactions from this test.

Results of the Toxin Reaction:

Age—Under six months all have maternal immunity. From six months to five years nearly all are non-immune. After five years the immunity per cent gradually rises, probably due to mild repeated contact infections. The per cent positive varies in New York City from 16 to 67 per cent in various schools. Age, race, family and housing conditions have their influence. A fair average in children, including high school age, is 25 to 30 per cent positive. Therefore we can say that babies under six months have maternal immunity. Children from six months to five years should all be immunized without going to the trouble of giving Schick test. Children over five should be Schick tested and all positives immunized.

Artificial Production of Permanent Immunity:

1. Ordinary antitoxin immunity lasts only two to four weeks.
2. Toxin antitoxin.

   A highly concentrated diphtheria toxin is slightly underneutralized by a concentrated antitoxin. One cc. of this mixture should give a small reaction in a 250 gram guinea pig. A 5 cc. dose should develop a paralysis in 15 days, and death of the pig two or three days later. It requires about six months to produce a stable standardized mixture and this will retain its stability for a year. Three of these 1 cc. doses at seven-day intervals are given. The toxin is neutralized to the extent of not being poisonous and yet it has the power to stimulate antitoxin production. The injection for all ages is 1 cc. of fluid, containing about 400 times the fatal dose for a half-grown guinea pig to which has been added slightly less than the antitoxin necessary to neutralize it. The reaction is usually slight, but in susceptible individuals may be fairly sharp. It is usually less than from typhoid-paratyphoid injections and more pronounced in those giving a positive combined reaction by Schick test.

Immunity:

Develops completely in about two months. Therefore it is of no service in the treatment of clinical diphtheria. Contacts can be immunized temporarily by antitoxin and in one month the permanent immunization done by toxin antitoxin; 85.5 per cent give negative reactions after five months. One or two additional injections should be given to the 14.5 per cent whose immunity is not complete. It is therefore wise to retest at the end of six months from initial immunization; 100 per cent remained immune after being handled as above by Park & Zingher in an institution five years ago. It is therefore safe to say that in all probability a complete permanent immunity can be developed by the above plan.

Cost of Immunization:

$1.25 per patient when a small number are treated. When large numbers are to be immunized the expense is much reduced. It is estimated that the one million school children of New York City could be immunized for $250,000, which is about $332,000 less than diphtheria cost New York City during the first six months of 1921.

The objection has been raised by Cumming and others that Toxin-Antitoxin immunization is dangerous to the community for the reason that it does not destroy the infecting organism and that it in no way diminishes the number of carriers. That cities in which toxin-antitoxin protection is pushed will "become reservoir hosts of bacilli." There is no reason why efforts looking toward the elimination of carriers should be discontinued but the solution of that problem is at present hopeless. The one per cent of carriers in every city community and the activity of the various antagonistic cults renders such efforts largely of no effect. Doctor Park reports that deaths from diphtheria in New York City have been reduced from 1500 in 1918 to 891 in 1921, and he believes that both morbidity and mortality can be further reduced by a continuation of intensive work with the Schick test and toxin-antitoxin immunization. It certainly will solve the problem in schools or institutions where the inmates are under sanitary control.

Student nurses in every training school should be tested and immunized. It is our duty as physicians to call the attention of parents to the

fact that this dread disease can be prevented. My own children have been immunized and it was a great comfort to me a few weeks ago, when my little five-year-old daughter developed a membrane on her throat, to know that it would not result in the development of a laryngeal stridor and that she would not require sensitization by large doses of horse serum. It proved to be a streptococcus infection.

The efficacy of these measures in an institution was beautifully illustrated by an experience that we have had during the past year at the Sherman Institute Indian School, Riverside. In June a group of children from Arizona arrived at the school from a portion of the Navajo reservation, where diphtheria had been prevalent. On June 24 one of these pupils came down with clinical diphtheria. Others developed from time to time and as the school enrollment was low at that time of year, only about 300 pupils remaining, we cultured all throats and found 32, or 10 per cent to be carriers. These were isolated and released as they became negative, two requiring tonsillectomy. The disease was apparently controlled until October when, following entrance into the school of another group of children from a diphtheria-infected community, it again became prevalent, sixteen clinical cases developing before it finally came under control. There were at this time over 700 pupils enrolled in addition to which there were over one hundred white employees and members of their families on the grounds.

Early in December 641 pupils were Schick tested; of these 351 gave positive reactions. The positives were all immunized by three injections, at weekly intervals, of toxin-antitoxin, and also 53 Indians at the school farm and 17 white employees' children who were not given the Schick test, making a total of 420. The last dose was given December 24, 1921. The results obtained were most interesting. Four clinical cases of diphtheria developed after the last immunizing dose was given, two on January 5th, one January 15th and one January 20th. These were all very mild and did not require antitoxin for their cure. These cases bear out the observations made by others, that full immunity does not develop immediately, but that the severity of the case reaction gradually becomes lessened until full immunity at the end of about two months is developed.

During January, February and March, thirteen cases of tonsilitis developed, some of which showed membranes that could not be differentiated clinically from diphtheria. One case on February 28th suggested diphtheria so strongly that I gave antitoxin at once, but cultures when examined the next morning gave only a staphylococcus growth. No clinical cases of diphtheria developed among Schick negative students. Every check and cross check in this observation proved the fact that the Schick test and toxin-antitoxin immunization can be depended upon to control clinical diphtheria even under the crowded conditions found in a government Indian school in a group of young people with very low racial immunity.

I desire to acknowledge the helpful assistance of my associate, Dr. T. A. Card, in this study.

SUMMARY OF AN IDEAL PLAN FOR HANDLING DIPHTHERIA

I. To Protect the Community:
  1. Clinical cases:
    (a) Antitoxin treatment.
    (b) Quarantine.
    (c) Release after three negative cultures.
  2. Contacts cultured:
    (a) Negatives released.
    (b) Positives given virulence test.
      (1) Isolate in open air.
      (2) Mild alkaline gargle.
      (3) Tonsillectomy if the carrier condition persists for a month.
      (4) Release avirulent.

II. To Protect the Individual:
  1. Schick Test all over five years to full maturity.
    (a) Babies under six months maternally immune.
    (b) Six months to five years all should be immunized by toxin antitoxin.
    (c) Five years and upward Schick Test.
      Immunize positives by three injections, 1 cc. toxin antitoxin mixture.
      Retest in six months and further immunize those still positive.

The Country Doctor—The election of Thomas Clay Edwards as president-elect of the Medical Society of California has called forth a number of editorials and other comment from a number of papers of the State. Among these, the San Jose News, of May 26, 1922, says:

"A few weeks ago Dr. T. C. Edwards, for forty years a general practitioner in Salinas, was elected president of the California Medical Society. His election was announced as a 'tribute to the work of the country doctor for humanity.'

"The tribute is well deserved by the country doctor. For while this is notoriously and flagrantly an age of specialization, basic general all around horse sense is a quality which is just as valuable as it ever was. The country doctor, the general practitioner, while he may occasionally blunder because he can't keep up with all the latest information on the progress of the various special divisions of the art he practices, yet seems to retain this grand old quality of basic horse sense to a great degree, whereas some of the specialists in medicine, as in other lines, seem to have more fancy zebra sense, or even jackass sense, than plain horse sense.

"Hurrah for the country doctor, the old fashioned general practitioner. He may have killed lots of people, but so has the specialist."

A Salinas paper of May 30, after paying splendid tribute to Dr. Edwards and complimenting the medical profession of the State for selecting a country doctor for its president, continues as follows:

"A lot of near-facetious comment, and 'smart aleck' cracks have been launched at the small town doctor. Just because he stays in the small town a lot of people get an idea that he isn't so efficient as his brother in the larger cities. That's all wrong. The big town chap handles only a certain line of diseases, 'Specialist' is what he calls himself. The country doctor is called to treat everything from an in-grown toe-nail to a broken back. Most of them could give the so-called 'city specialist' a close run in the latter fellow's particular line. You simply have to doff your tile to the country doctor. He's one grand scout. Generally he knows more community history, scandal and gossip than anyone in his section. But he's a close-mouthed business-like, genial, lovable mortal who undergoes a lot of things that would drive a lot of us to the goofy house. Salinas appreciates the honor done Dr. Edwards. Her people extend congratulations. The honor to him is no less an honor to every doctor in Salinas, and—for that matter—to every country doctor in the whole land. May God bless 'em—every one of 'em.

IS THE MELTZER-LYON TECHNIC FOR THE DIAGNOSIS AND TREATMENT OF GALL BLADDER DISEASE AN ASSET OR A LIABILITY?*

By WALTER C. ALVAREZ

PART I.

In 1917 Meltzer suggested, first, that inasmuch as the sphincter at the end of the common duct presumably must relax when the gall bladder contracts, if the contents of the gall bladder are to be extruded into the duodenum, the activities of the sphincter and the bladder must be coordinated and under the control of the "Law of Contrary Innervation." Second, if this be true, magnesium sulphate, when it relaxes the sphincter, must theoretically cause a reflex contraction of the gall bladder. Third, if magnesium sulphate were to be injected into the duodenum, it might help in overcoming jaundice and biliary colic.

The third suggestion was immediately put to the test by Vincent Lyon of Philadelphia. He observed that when the duodenal tube is first passed into the bowel, little or no bile can be withdrawn. Shortly after the injection of the magnesium sulphate, yellow bile appears; and shortly after that, there appears a darker and sometimes thicker bile. He assumed that the darker bile must come from the gall bladder, and the next step was to diagnose cholecystitis by the finding in this bile of pus cells, crystalline material and bacteria. Another step was to try to cure cholecystitis by repeated "drainages."

Certainly if Lyon is right in his contention this new method of diagnosis and treatment will be a great asset to the medical profession. If, however, the method is not based on a solid foundation; if it will lead to the making of wrong diagnoses and the performance of unnecessaray operations; if it will cause physicians to waste their time and their patients' time and money; and if it will encourage patients to go on with futile medical treatment until old age, starvation, myocarditis and other complications bar the way to surgical relief, it will be a liability. As I have seen of late a number of cases in which the use of the method was ill-advised and its results unfortunate, it seems to me that we must not drift along using "biliary drainage" simply because it is being done, but as scientific physicians we must stop for a few minutes to see how much grounding it has in physiologic fact, and how much likelihood there is of its ever being able to clear up the diseased conditions which we find in cholecystitis.

A review of the large literature which has already grown up about the subject shows that, for the most part, the clinical reports are very favorable. That is to be expected with any new form of treatment. On the other hand, nearly all the reports on work done in an attempt to determine the accuracy of Meltzer and Lyon's physiological contentions have served to cast doubt upon them and upon the method derived from them. In the first place, Meltzer's original theorem of a contrary action has been pretty thoroughly discredited by the finding that a number of substances besides magnesium sulphate will produce the typical flow when they are injected into the duodenum. As most of these drugs do not relax the sphincter, it cannot be argued that they will reflexly stimulate the gall bladder. Furthermore, it cannot be shown on either animals or men that the flow of bile produced by magnesium sulphate is accompanied by a contraction of the gall bladder. It seems clear now that that organ is a weak and sluggish one which never contracts down like the urinary bladder does, even when it is stimulated directly by strong electric currents. When it does contract it produces pressures of at most 30 mm. of water, barely enough to overcome the resistance of the valves in the cystic duct. The writer has tried several times to stimulate the gall bladders of animals (anesthetized with urethane and opened under salt solution) into visible activity, but without success. We know also that at operations on men or on animals, the gall bladder is practically never found empty, as it would be if it occasionally squeezed out its contents. The available evidence suggests strongly that bile flows from the gall bladder, not because the muscle there has contracted, but simply because the pressure in the common duct has been lowered by the relaxation of the sphincter at the duodenal end.

Certainly, in the face of these physiological data, the users of the Meltzer-Lyon technic can no longer assume with any confidence that the dark bile comes from the gall bladder. There are a few experiments recorded which suggest that occasionally that may be the case, but most of them show conclusively that the color changes can be obtained in the entire absence of a gall bladder, that is, when that organ has been removed by operation or closed off by disease. It follows that if we cannot safely assume that the dark bile has come from the gall bladder we must not attempt to diagnose cholecystitis because we find bacteria or detritus in that bile. Furthermore, it must be remembered that although the duodenum contains fewer bacteria than does any other part of the bowel, it generally contains some; and it has been shown that an increase in their number will depend largely on the degree of acidity of the gastric juice, upon the amount of saliva swallowed, the sterility of the last food eaten, the condition of the teeth, etc. Another difficulty is that in a surprisingly large proportion of cases of gall bladder disease operated upon, no bacteria can be grown from the bile even with the most advanced cultural methods. Even in the presence of stones, more than 50 per cent of the biles are sterile. Unfortunately, few of the men who have tried to use the Meltzer-Lyon technic diagnostically seem to have been aware of these limitations and sources of error.

THERAPEUTIC PROBLEMS

It seems pretty clear from this review that as a diagnostic procedure the method has hardly a leg to stand upon. Let us see now if it fares any

* Read before the Section on General Medicine at the Fifty-first Annual Meeting of the Medical Society of the State of California, Yosemite Valley, May, 1922.

better when we come to examine its therapeutic pretensions. To begin with, we can admit two things: First, that it cannot be expected to have any influence on gall stones; second, that it may easily be of some benefit in the treatment of catarrhal jaundice. Even there, however, it is hard to say how much good it does because the patients get well anyhow, and one can never tell in a given case whether or not the period of illness has been shortened by the treatment. Thus, recently, one of my patients began to fade in about three days. If I had done as I had planned, and had given him one or two Meltzer-Lyon treatments, the outcome in his case would have furnished a strong argument in favor of the new technic.

The great difficulty in treating chronic cholecystitis is that we are faced with an infectious process which is localized not only in the walls of the gall bladder but, as Graham and Judd have shown, is generally scattered through the liver, through the glands about the cystic duct and often into the head of the pancreas. Even if we could clear up this infection with a few treatments, how could we hope to prevent its recurrence; and why should we expect a "non-surgical drainage" to succeed when the surgical drainage has so often failed? As is well known, a large proportion of the people who are relieved of their symptoms after operative drainage, return later for a cholecystectomy, because the infection has returned and new stones have been formed. Meyer, at the Hooper Foundation, has produced chronic recurring cholecystitis in animals simply by putting small foreign bodies into their gall bladders. This little handicap so lowers the resistance of the organ that although it may clear itself of the infection from time to time, it cannot remain clear. Similarly, a woman with gall stones or a scarred gall bladder, is subject to a flareup of infection whenever she has a cold, or whenever she puts undue strain on her digestive tract.

That being the case, it seems to me that there is only one thing to do with a chronically diseased gall bladder if we really want a cure, and that is to take it out. Individual cases will always have to be treated individually, however, and in the present state of our knowledge it is often hard to decide when a patient should be urged to go to the surgeon, and when she should be advised to let well enough alone.

I am glad to see that Lyon now admits that we must be careful how we speak of "cures" in an essentially chronic disease, and that he advises immediate operation in many of the bad cases. I agree with him that his technic is worth trying on certain people who for one reason or another cannot submit to operation, or who have had unsuccessful or partly successful operations. Furthermore, I think it should be tried in every rebellious case of catarrhal jaundice. The method may occasionally be helpful in establishing the presence of severe cholecystitis, but I would never think of relying upon it for the diagnosis of early or obscure forms of the disease.

LETHARGIC ENCEPHALITIS

By N. T. McARTHUR, M. D., Napa State Hospital, Imola, California

Epidemic Encephalitis began in Europe in 1916 and 1917, following in the wake of the influenza. Early the next winter the disease appeared in epidemic form in Paris. It then spread to England, where it was mistaken for Botulism, but the error was soon corrected by the investigation of McNalty, James and Marinesco and McIntosh. Encephalitis did not remain in Europe, but soon spread to Africa, Asia, Australasia and America, appearing here in the winter of 1918 and 1919.

It is interesting to note the spread of Encephalitis in America during the first six months of 1921. In New York there were 153 cases; in Connecticut 52; in Illinois 168; in Wisconsin 16; in Oregon 11; in California 30. The southeastern, southern and southwestern states seemed to have escaped, as only a few scattering cases were reported. The disease first made its appearance in Napa County the latter part of September and continued until the middle of October, claiming in Napa alone five patients, all of whom died. The disease met with at Napa was of a very virulent and rapid form, being of three distinct types: lethargic encephalitis, poliencephalitis and a milder type of encephalitis with a crisis and a rather rapid convalescence.

Age and Sex—There were five cases in all, the youngest patient being five years old and the oldest eighteen; two males and three females.

Relation to Influenza—This relation was direct; in all cases there was a history of influenza.

Mode of Onset—The premonitory symptoms were lassitude, general malaise, marked constipation, insomnia, pain in neck, jerking and twitching being frequent symptoms, with headache and gastro-intestinal disturbances culminating in vomiting.

Fever—All patients had fever, the temperature rapidly rising from normal to 105, with a slight drop before death.

Pulse—The pulse presented the usual features of infectious diseases, ranging from 100 to 120. At times the pulse was very weak and stimulation had to be resorted to.

Central Nervous System—Restlessness and insomnia were marked in all cases, especially the lethargic type which later developed listlessness, stupor, and a mask-like face. There were also present ptosis, diplopia, facial palsy, and partial opisthotonos with a characteristic pill-rolling posture of the hands. The patients remained in the state of lethargy and somnolence with a gradual darkening of the sensorium until pulmonary oedema caused death.

Cranial Nerves—Involvement of the third cranial nerve was shown by diplopia, also by ptosis which was present in three out of five cases. Involvement of fourth cranial nerve was shown by paralysis in three cases. Involvement of fifth cranial nerve was shown by difficulty in mastication in four cases. Involvement of the seventh cranial nerve was shown by incomplete facial palsy

in four out of five cases. Involvement of the ninth cranial nerve was shown by disphagia in four out of five cases.

Peripheral Nerves—Involvement of the peripheral nerves was marked by pain, especially in the occipital region and in the nerves radiating from the spine. The patients also complained of pain along the various peripheral nerves in the upper and lower extremities. This pain at first was of a lancinating nature.

Trophic and Vasomotor Disturbances—There was always more or less cyanosis around the patient's finger tips and toes with profuse perspiration.

CASE REPORTS

History of Case 1—The patient was a well nourished male thirteen years of age, a native of California. He had a moderately severe attack of influenza in 1918. The present illness began October 2, 1922, when he complained of headache, general malaise, and marked constipation. On this day he vomited. His temperature was 102. He was rather talkative with marked insomnia. October 4 patient complained of headache, temperature 102.2. Physical examination was negative. In the evening the headache was more severe. The pupils were moderately dilated, reacting sluggishly to light. The patient was restless, irritable, and slightly delirious. The patellar reflexes were diminished. Kernig's sign was positive on left side; Babinski reaction was negative. The leucocytic count was 12,000. Temperature was 103; pulse, 112. October 5 the patient was restless with twitching of muscles, and was delirious throughout the night; temperature was 104; pulse 120; a marked stiffness of the neck with partial opisthotonos; diplopia present; ptosis and Kernig's sign marked on left, doubtful on right. Examination of chest was negative. Deep abdominal reflexes lost. In the evening his face assumed the expressionless type; at 5:30 p. m. his temperature arose to 105.2 with involuntary urination. October 6 Cheyne-Stokes' respiration during the night. Stupor manifest, but could be aroused to swallow nourishment; condition remained the same during the day, temperature slowly dropping; at 12 p. m. it was 101.8. October 7 dysphagia first noticed; other conditions the same. At 1:15 the temperature was slightly elevated; pulmonary oedema was marked; died at 2:25 p. m. (No autopsy was performed.)

History of Case 2—A well nourished female, aged 18, native of California, attended school, definite history of influenza in 1918. The family history was similar to that of "Case 1." Previous history: Had always been a very nervous girl subject to severe headaches and uterine pains at menstrual periods.

Present Illness—Patient has had a headache and uterine pains for the last three or four days; because she was in the menstrual period the pain was attributed to that. In the afternoon of October 9 she first learned of the death of her nephew, "Case 1," and had an hysterical laughing attack. Shortly afterwards her physician was called. Temperature 102; pupils wide and dilated, not reacting to light; complained of severe headache and pain in back and neck. October 10 temperature throughout the night varied between 102 and 102.4; marked constipation with insomnia. Examination of chest and abdomen, negative. Patellar reflexes normal; Kernig's and Bakinski reactions negative. In the evening pain extended down the spine and was of a lanscinating nature. Pupils as above; temperature rose to 103.4. October 11 pain extending down into legs; temperature 103; pulse 120; well marked double Kernig; Babinski negative; could not move the left leg; paralysis of a flaccid nature. Patellar reflexes absent on left, present on right; no ankle clonus. Plantar reflexes diminished on both sides. Kernig's sign present on both sides; neck stiff and painful. Leucocytes 9000. October 12 during the night the temperature dropped to 99, then rose to 103 and dropped to 103 and dropped again to 100; marked muscular twitching wtih loss of deep abdominal reflexes; some retraction of head; very little pain; patient hopeful with a feeling of well-being. Her pupils remained as above; urinary retention. At 12 o'clock Cheyne-Stokes' respiration with marked cyanosis of face and neck. At 3:40 p. m. spinal puncture was done. Fluid was crystal clear and under no pressure. The cell count showed 80 large mononuclear cells; Globulin, negative; mastic and guinea pig inoculation. The left arm developed a flaccid paralysis with beginning paralysis of respiratory muscles; diaphragmatic breathing with slight opisthotonous; temperature 100; pulse rapid and weak; respiration, difficult; difficulty in swallowing. October 13 temperature still dropping; respiratory rate increasing; dysphagia with retention of urine; commencement of pulmonary oedema; profuse prespiration; mind clear and alert throughout illness; slowly sinking from respiratory paralysis; increasing pulmonary oedema; and death at 6 p. m.

Autopsy Report—Well built, well nourished female; age 18; pupils moderately dilated and equal; beginning rigor mortis of upper extremities. Brain: Marked infiltration and congestion of the vessels in the meninges; marked congestion of cortex and medulla showing a hyperaemia and a moderate exudate, particularly in the region of pons and medulla. Cut section of the brain showed marked punctate hemorrhages below the level of the fourth ventricle especially around the nuclei and extending out into the cortical portion of the brain. See Plate 3. Microscopical section of cerebellum showed perivascular infiltration.

Spinal Cord—Microscopical section of cord showed infiltration along the vessels parallel to the right dorsal horn of cord. Marked inflammation and round-celled infiltration were present about the vessels of the ventral fissure, also inflammation and round-celled infiltration about the vessels of the apex of the left ventral horn.

History of Case 3—A poorly nourished male aged ten, native of California, had a moderately severe attack of influenza in 1918. Present illness began October 3; complained of headache, general malaise, marked constipation with insomnia. October 4: Pulse 160; temperature 105.2; pulse rapid and weak. Patient restless, acts as if in pain, turning constantly with profuse sweating; unable to swallow; involuntary urine with ptosis, diplopia; face assuming mask-like character with arms in partial flexion and the fingers of the hand in characteristic pill-rolling posture. October 5: Patient complained of pain in head when roused from stupor, gradually growing into a more stuporous condition; difficulty in respiration; temperature the same; pulse 120, weak and thready. October 6: Patient in stuporous condition from which it was difficult to arouse him; commencing pulmonary oedema and death at 5 a. m. No autopsy.

History of Case 4—Poorly nourished male aged eight, native of California, attending school, direct history of influenza, brother of "Case 1." Present illness began October 4 with general malaise, marked constipation, talkative, with insomnia. October 5: pulse rapid, temperature 104.2; patient restless, complaining of pain in back of head in occipital region, neck muscles rather stiff and rigid. October 6: Patient very restless, temperature rising, with profuse sweating; difficulty in swallowing, involuntary urine with ptosis and diplopia; face assuming a mask-like character with arms and forearms as in "Case 3." October 7: Child growing into a more stuporous condition; difficulty in respiration; pulse 118, weak and thready. October 8: Patient in stu-

porous condition from which it was difficult to arouse him; commencing pulmonary oedema followed by death.

Autopsy Report—Poorly nourished male. Pupils moderately dilated and equal; marked cyanosis of face and neck. Beginning post-mortem rigidity. Post-mortem lividity from shoulders to buttocks. Brain: There was a marked infiltration of the vessels of the meninges with hyperaemia of the cortical vessels and a grayish exudate in the region of pons medulla. Cut section of the brain showed many punctate hemorrhages, especially around the substantia nigra. The cord, normal. Lungs, pulmonary oedema. Heart, cloudy swelling. Kidneys, cloudy swelling. Spleen, cloudy swelling. Liver, cloudy swelling.

Laboratory Findings of "Case 4"—Spinal puncture done on this case; fluid crystal clear; cell count 3; globulin negative; collodial gold, negative; mastic, negative; Guinea pig inoculation, negative. "Case No. 2" and "Case No. 4" had cultures taken from the ventricles of the brain and heart and inoculated on blood serum, bouillon and slant Agar, with negative findings.

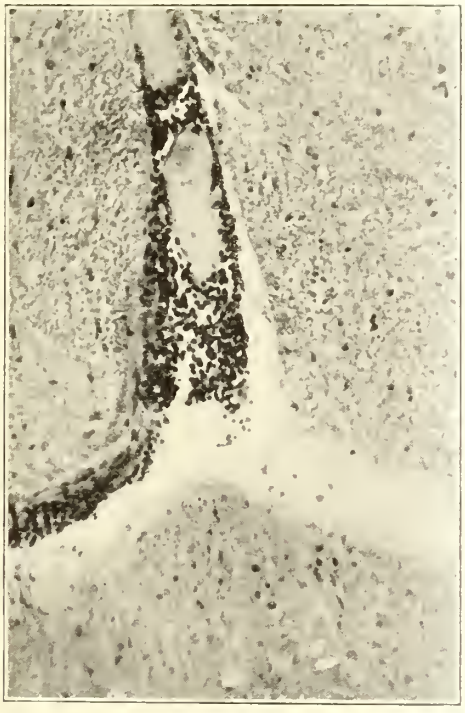

PLATE 2
Inflammation about vessel in brain. Obj. A (Zeiss) Oc.

History of Case 5—Poorly nourished female aged five, native of California, direct history of influenza. Present illness began October 4; died October 8. This case began with general malaise, headache, marked constipation, rapid rise in temperature with rapid, weak, thready pulse; developing stiffness in muscles of neck, diplopia, ptosis, irritability, stupor, delirium, mask-like face, pulmonary oedema, and death.

History of Case 6—Male, aged twelve, native of California; family history negative. Previous history, measles, mumps, scarlet fever. Present illness, September 25, patient had some fever, causing the mother to suspect a gastrointestinal upset. The following day he went to school, complaining of headache and fever; pain over the cervical and upper thoracic vertebra. Physical examination: Fairly well-nourished boy of twelve; restless, constantly moving hands and feet. Eyes showed converging strabismus. Nasal passages, negative. Chest, negative. Abdomen, negative. Upper and lower extremities, negative. Skin dry and warm. Reflexes: Eyes react normally; knee-jerks exaggerated; Kernig sign positive; Babinski reaction positive; slight ankle clonus; cremasterics slightly increased; temperature 102.5; pulse 110; respiration 24.

September 26, some retraction of head but no definite opisthotonos, pain in neck and spine increasing. Spinal puncture taken and fluid crystal clear under slight pressure. Cell count, 18. September 22, spinal puncture seemed to have relieved patient, who was greatly improved; temperature had fallen to normal; respiration 18; pulse 100. The nervousness was replaced by apathy. There was no diplopia noted throughout illness. The reflexes were markedly diminished. There were no sensory disturbances except along the spine, which was markedly hypersensitive. The forearms were flexed across the chest, and attempts at forcible extension were very painful. For the following forty-eight hours there was no change. The patient slept most of the time, after which the drowsiness began to diminish and he made a rapid convalescence. A week later, patient was convalescing satisfactorily. There was no evidence of paralysis; reflexes negative; forearms could be extended nearly 90 degrees; mentally clear.

PLATE 3
Showing punctate hemorrhage and dilatation of vessels throughout the gray and white matter below the level of the third ventricle.

Epidemic Encephalitis belongs to the class of infectious diseases of an inflammatory nature. Rosenau has demonstrated that the filterable virus reproduces the disease in white rabbits. The six cases presented in this paper show three distinct types: Cases 1, 3, 4 and 5 are distinctly lethargic in nature and of a very rapid, virulent form. Case 2 falls in the Poliencephalitis type, while Case 6 is of a milder lethargic type, progressing

after the acute symptoms to a successful convalescence and to a recovery. Most authors claim no contagion or infection; however, here we see a whole family dying, one child after another. Case 1 attended the same school as Cases 3, 4, 5 and 6. Case 2 was the aunt of Case 1, and had been indirectly exposed to Case 1. Therefore, the question of the mode of transmission appears to be rather direct in this family. For the differential diagnoses from the laboratory standpoint, see the following table:

Condition	Color	Globulin	Cells	Lange	Mastic
Normal	Clear	Negative	1 to 5	Negative	Negative
Encephalitis	"	"	10 to 20	"	"
Meningococcus	Turbid	Positive	50 to 800	Meningitic zone	Positive
Ant Poliomyelitis	Opalescent	"	10 to 100	Luetic zone	"

Pathology—The cerebral cortex was found normal except for congestion of the vessels of the meninges (See Plate 1). In the brain substance the changes were more marked in the basilar neuclei of the brain, the upper part of the pons and peduncles and in the gray matter around the floor of the fourth ventricle (See Plates 3, 4 and 5). Negative findings in the cord except in Case 1, where the cord was more or less involved during its entire length. The meninges showed hyperaemia, distention of the vessels with small punctate hemorrhages.

Microscopic—The pia of the cerebrum and cerebellum showed distention of the vessels with blood, round-celled infiltration especially marked around and in the vessel walls. Very slight perivascular infiltration in the brain substance; here and there a hemorrhage is seen in the outer vessels of the cortex. In the medulla, pons, basal ganglion. The pia showed the same pathology, but more marked and the perivascular infiltration follows the vessels deeply into the tissue; cellular infiltration is found both in the white and gray matter but by far the greater per cent is in the gray matter. The cells are mostly lymphocytes, plasma cells, and a few large mononuclear cells. The blood-vessels, though densely infiltrated, showed no endarthritis.

CONCLUSIONS

The pathological pictures showed typical round-celled infiltration with perivascular inflammation, Case 2 showing a marked similarity to poliomyelitis, but such extensive infiltration of the meninges and larger vessels of brain would be unusual in poliomyelitis. A direct relation between influenza and encephalitis was proved in all cases except in that of Case 6. Cases 1, 2, 3, 4 and 5 would rather lead us to suspect that encephalitis is an infectious disease.

I wish to thank doctors E. Z. Hennessey, Robert Crees and C. H. Bulson of Napa for the case histories of these patients; Dr. A. C. Matthews, Medical Superintendent of the Napa State Hospital, for allowing me the time to do this work; and Dr. Frank E. Blaisdell, Sr., and Dr. William Ophuls of the Stanford Medical Department for taking the photographs and for their suggestions.

CHAIRMAN'S ADDRESS, EYE, EAR, NOSE AND THROAT SECTION *

By F. A. BURTON, M. D., San Diego

First of all I wish to thank Dr. Harvard McNaught, the secretary, and the members of the section who have co-operated in providing the program for the meeting. With this valuable assistance, the work of the chairman has been a pleasant task. Since our time is limited, I will confine myself to a few general remarks.

There are three classes of eye, ear, nose and throat specialists—the progressive, the stationary and the retrogressive. The retrogressive has passed the period of usefulness; the stationary is the one who says in his heart, "My work is good enough"; the progressive is the specialist who forges ahead. It is not necessary that one go forward by leaps and bounds, but the essential point is that he is moving in the right direction.

It is a well known fact that every religious, political or educational system is judged by the kind of man it forms. This also holds true of a medical society—with this difference: that the latter is more democratic. As the people of a democratic government are the government, so the members of a medical society are the society, and it is up to the individual member to decide the nature and value of his organization. We get out of life just what we put into it, and you will get out of this section meeting just what you put into it. If you are satisfied to listen to the reading and discussion of papers by others, you will get something out of the meeting, but you will get infinitely more if you take part.

In his practice the specialist of the first class makes careful, thorough histories; he goes back at least to the history of the immediate family, and the patient's history of disease is taken from birth to the time of examination. Wherever possible, it is valuable to obtain the information of when, where and how the first symptom relevant to the disease in question made its appearance. It is not enough to learn only the symptoms presenting at the time of the examination.

The progressive eye, ear, nose and throat specialist continually reviews the anatomy of his field. This is especially needful in investigating the nasal accessory sinuses, because of their anatomical variance. In addition to the usual methods, transillumination and the X-ray are employed. The X-ray may not be necessary to determine a sinus infection, but it is valuable in ascertaining the size, shape and extent of the cells. No sinus surgery should be performed without first determining these important points. The progressive specialist in this field looks for pathology. It is not scientific, upon hearing the symptoms, to jump at a final conclusion as to the diagnosis. In determining the pathology causing the symptoms, a complete physical examination is often required, as it is important that the most urgent thing receive attention first. In case of infection, it is of

* Read before the Fifty-first Annual Meeting of the Medical Society of the State of California, Yosemite Valley, May, 1922.

undoubted value to know the bacteriology. If due to streptococci, the condition is more serious than if due to staphlococci, and if the intruding germ be the streptococcus haemolyticus, rapidity of action and probability of extension must be taken into account. And if the infecting organism be the streptococcus mucosus capsulatus, one looks for extensive destruction of both soft and bony tissue, even in the absence of pain.

The progressive specialist, in his surgical cases, gives careful attention to the matter of anaesthesia. He considers the welfare of the patient and is not a slave to routine. In his intranasal and sinus surgery, whenever possible, he uses local anaesthesia.

The specialist of the first class avoids unnecessary surgery through conservative medical treatment; where surgery is necessary, through thorough examination and pre-operative care, he lowers the surgical risk. He provides wherever feasible a field free from pus and inflammation. Subsequent to the operation he administers the indicated post-operative care until the wound is healed. In this way he observes the final outcome of his work, renders a valuable service to his patient, and adds to his own satisfaction. The specialist who is moving in the right direction, has the welfare of his patient, his society, and his fellow physician sincerely at heart.

You share in the responsibility of failure on the part of your medical society, your hospital, or your fellow in medicine to comply with the highest requirements. Such a failure calls for calm and constructive criticism. Boost, don't knock. You cannot despise, envy or hate another without giving him some of your time. Be leaders, not followers. A man is not made by what others think of him, but by what he thinks himself. Merit a good opinion of yourself.

He who has climbed can lift, and you have reached an enviable height among eye, ear, nose and throat specialists. Others are influenced by what you do. You have accepted the exalted position of leadership. Let your relations with patients be free from mystery, and with referring physicians, free from secrecy. Your patient has the inalienable right to human interest and scientific service.

Remember with Lord Essex: "Genius is entitled to respect only when it promotes the peace and improves the happiness of mankind."

Resolution Approving Women's Auxiliary.—"The Women's Auxiliary of the State Medical Association of Texas respectfully requests the approval of the American Medical Association of a movement to organize a Women's Auxiliary to the American Medical Association. The object of this auxiliary shall be: To extend the aims of the medical profession through the wives of the doctors to the various women's organizations, which look to the advancement in health and education; also to assist in entertainment at all Medical Conventions, and to promote acquaintanceship among doctors' families that closer professional fellowship may exist."—Abstract from Minutes of the Seventy-Third Annual Session of the A. M. A.

CHAIRMAN'S ADDRESS, SURGICAL SECTION *

By CHAS. D. LOCKWOOD, A. B., M. D., F. A. C. S.

Members of the Surgical Section:—

I am deeply appreciative of the honor you conferred upon me one year ago in electing me chairman of this section. Although this is but the third year that we have met as an independent section, there is already apparent a spirit of loyalty and co-operation which augurs well for the future growth and scientific character of our meetings.

The field of the general surgeon is being ever more and more narrowed by the growth of specialism. Surgeons of the generation that is now passing have regarded as their domain the entire field of surgery, with the possible exception of eye, ear, nose and throat work. The surgical specialists have gradually emerged as our knowledge of technique and diagnosis broadened. The older specialists were the natural outgrowth of their environment and practice. Well grounded in the principles of surgery, they readily acquired the technique of new operations and kept abreast of all new developments in surgery. Chance, special adaptation or the exigencies of practice were the deciding factors in the selection of a specialty more often than deliberate choice.

This older type of specialism was founded upon a broader surgical experience and a deeper knowledge of human nature, but it lacked in the diagnostic skill and refinement of technique which characterize the specialists of today. The newer generation of specialists have, for the most part, deliberately chosen their field of work and have acquired great skill in the use of the newer instruments of precision and familiarity with the laboratory and other methods of diagnosis. Too often this special skill has been acquired at the sacrifice of a broader and more fundamental knowledge based upon practical experience.

It is no longer possible for any one individual to cover the whole field of medicine and surgery and it is inevitable that specialism will flourish ever more and more. There is, however, grave danger that this tendency toward specialism will lead to professional suicide. Regular schools of medicine have become so highly specialized and exclusive that they no longer qualify men for general practice. The vast majority of recent graduates are ambitious to become specialists and few of them are willing to travel the more difficult path of the general practitioner. Our line of communication or contact with the average sick person is being broken and the place of the old-fashioned family physician is being usurped to a certain extent by the chiropractors, the osteopaths and other cultists.

Many people cannot afford to pay specialists' fees and they are unwilling to do so when they have only what they believe to be simple ailments. There should be some way provided whereby the best in medicine and surgery will be avail-

* Read before the Fifty-first Annual Meeting of the Medical Society of the State of California, Yosemite Valley, May, 1922.

able for the average citizen. This need is being met in a fairly satisfactory way for the poor man by free clinics and dispensaries, but it is more difficult for the self-respecting person of moderate means to secure the best that scientific medicine has to offer. This large class patronizes extensively the faddist and the pseudo-doctor of the day. It is to this class that we must look for support in our efforts to promote public health. They must have more of the benefits of scientific medicine than they can afford to pay for at current fees of hospitals, laboratories and specialists. There are two or three possible solutions of this problem.

The organization by physicians of health centers, accessible to citizens, country districts and smaller towns. These centers must be under the control of the medical profession, either through their county societies or by other means of co-operation between medical men. They should be manned by a corps of physicians representing the various specialties, nurses trained in public health work and technicians in laboratory and X-ray work. Patients too sick to visit these centers should be cared for in community hospitals, conveniently located and under the direction of the personnel of the health center. Contact should be maintained with convalescent patients and those only mildly sick through visiting nurses and younger physicians who are serving an apprenticeship before entering upon a specialty. A schedule of fees commensurate with the ability of the patient to pay should be maintained and a fair distribution of this compensation made among those serving the center.

Group clinics, organized by physicians and conducted as private enterprises. The fundamental object in every such organization must be better service to the sick. Co-operation is most essential in dignostic work. Not only is proximity of offices desirable, but there must be congeniality, mutual respect and a high sense of responsibility on the part of each member of the group. There should be perfect freedom in referring patients to the various departments and frequent group conferences should be held on obscure and difficult cases.

The aids to diagnosis have become so numerous and complex that little or no profit can be expected to accrue from the diagnostic side of medicine. It is possible, however, to greatly reduce the cost of complete examinations by co-ordinated effort and to bring it within the reach of those of average incomes.

The third method by which complete and satisfactory medical and surgical service may be rendered is through a well organized hospital having a closed staff. If it is to serve all classes of patients and give them the benefit of group diagnosis, it must have a large endowment and a resident staff. Such institutions are possible only in our larger cities or connected with teaching institutions.

What shall be the role of the general surgeon in this new era of medicine which seems to be dawning? Is his field to become so restricted by the encroachments of the various specialists that he himself will be compelled to limit himself to one organ or one group of organs? Is he to share equally with the internist the growing field of diagnosis or is he to degenerate into a repair man who will be called in to patch a blowout or remove a defective spark plug?

The field of diagnosis has heretofore been surrendered largely to the internist and the surgeon has been content to concentrate upon technique. There is no good reason why this should be so. The qualities of mind and the manual dexterity which distinguish the modern surgeon also qualify him for the work of a diagnostician. With a broad general training, his special knowledge of anatomy and his familiarity with living pathology, he should be ideally equipped to compete with the physician in the field of diagnosis. There should be no line of demarcation between surgical diagnosis and general diagnosis.

The physician and the general surgeon aided by the laboratory and other special diagnostic facilities, should work hand in hand maintaining a broad outlook upon the whole field of medicine and acting as balance wheels for the more restricted specialties.

Educating the People—"To give the people such a general knowledge of medicine that they will appreciate the importance of methods for the prevention of disease, will appreciate the advantages of early diagnosis and treatment of beginning maladies, and know something of the nature of the diseases with which they are or are likely to be afflicted, but particularly that they will be less credulous in accepting the claims of uneducated and untrained dabblers at the healing art, is an undertaking of no small magnitude. One naturally wonders how it is to be accomplished and who is to accomplish it. That the medical profession, the nursing profession, and the Public Health Service are now rather promiscuously engaged in the undertaking does not assure us that it will be accomplished by either or all of them.

When the family physician was in vogue, his people entrusted the care of their health and their lives to one in whom they had confidence, whose word they accepted without question, whose advice they followed without reservation. They had no desire for intimate knowledge of disease processes and saw no occasion to investigate the relative value of different methods of treatment. There are still a few of these people in the world. There were many others not thus attached; some with a little wisdom, more conceit and no confidence in anyone; some with no wisdom, no conceit and confidence in everyone; but all complaisant dupes to the ingenious tyro, smooth-tongued charlatan, and patent medicine venders. There are still many of these people in the world. Men in the medical profession bewail the credulity of the people in things medical, but of all the people in the world the most credulous in things not medical are the men in the medical profession."—(The Journal of the Kansas Medical Society, June, 1922.)

Resolution Directing a Survey of Pay Clinics and Group Practice—(Abstract from Minutes of the Seventy-Third Annual Session of the A. M. A.)

"(d) Your committee approves the recommendations of the Board of Trustees that a survey be made of existing pay clinics, diagnostic clinics and group practice, to be conducted jointly by the Judicial Council and the Council on Medical Education and Hospitals. We recommend that their reports and recommendations be submitted to the next annual meeting of the house."

AN ANATOMICAL AND EMBRYOLOGICAL STUDY OF THE PERINEUM *

By MILEY B. WESSON, M. D., San Francisco

INTRODUCTION

The foundation of all perineal surgery is an exact knowledge of the rectourethralis muscle and Devonvilliers fascia. The information gained from a perusal of the literature is unsatisfactory, as the nomenclature is confusing, and the descriptions vary markedly, being based upon studies of individual variations. The exact origin and insertion of the rectourethralis muscle is most important, since, aside from the loss of urinary control caused by cutting the external vesical sphincter, the only valid objection urged against the perineal prostatectomy is the danger of a rectal tear due to the improper dividing of this muscle. Devonvilliers fascia is the goal aimed for in every perineal operation, and when its glistening white layer comes into view the surgeon feels that he has passed the region of uncharted dangers. This fascia, which separates the rectum from the prostate, can be split into two layers, and hence the didactic statement, that it represents the fused layer of the fetal peritoneum, has been generally accepted.

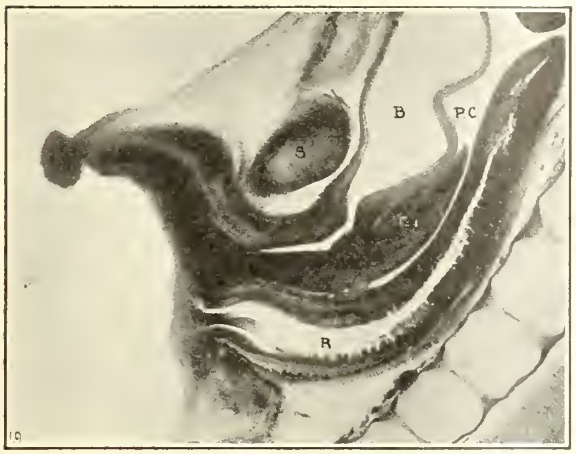

Fig 1.—Mid-sagittal section of genito-urinary region of 46 mm. human embryo. The fused layers of fetal peritoneum have not been wholly absorbed, as is shown by the presence of small "cysts"; S, symphysis; B, bladder; PC, peritoneal cavity; ED, ejaculatory duct; R, rectum. (Embryo, Carnegie Institute, 1686, slide 23, row 1, section 2.) X 21.

HISTORY

Devonvilliers, in 1836, enunciated the hypothesis that the center or nucleus of the perineum is a prerectal raphe or "aponeurosis prostato-perintonele." This fibrous plane is triangular in shape with a truncated apex deep behind which blends with the superior layer of the triangular ligament, while the base at the top is adherent to the inferior face of the peritoneum, thereby helping form the recto-vesical cul-de-sac. The posterior layer is in contact with the rectum to which it is joined with very loose cellular tissue, while from the superior face arise dense cellular elongations which envelop the seminal vesicles, vasa-deferentia and inferior extremities of the ureters.

In 1899 Cuneo and Veau went a step further and stated that the prostato-peritonele aponeurosis of Devonvilliers was formed by a fusion of the fetal peritoneum of the rectovesical cul-de-sac, the two peritoneal layers combining and forming an aponeuotic sheet with a complete correspondence of the arrangement of the peritoneum in embryos of both sexes. Even if the original fused layers disappear they make the framework for later layers of fibers. As proof of this primitive fusion they call attention to evidences of incomplete fusions such as vesico-seminal cysts, perineal hernias and the cul-de-sac of Douglas in the female.

The following year Proust stated that, while the ideal scheme was to admit the existence of a prerectal fascia forming a nucleus of the perineum, as suggested by Devonvilliers, unfortunately the hypothesis could not be reconciled with surgical anatomy, for while it was easy to separate the coverings of the prostate into anterior and posterior layers, it was most difficult to peel out the seminal vesicles, bladder and rectum.

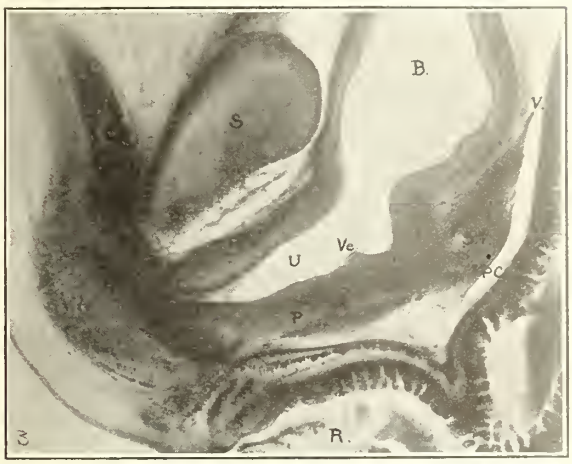

Fig. 2.—Sagittal section through pelvis of 67 mm. human embryo: B, bladder; U, urethra; Ve, verumontanum; V, vas deferens; SV, seminal vesicle; P, prostate; PC, peritoneal cavity; R, rectum; RU, rectourethralis muscle; CC, corpus cavernosus; S, symphysis pubis. (Embryo, Carnegie Institute, 1656, slide 47.) X 18.5.

MATERIAL AND METHODS

The material used for microscopic study consisted of serial sections of 31 human embryos obtained from the collection of the Carnegie Institute of Embryology. Several specimens of the rectourethralis muscle were obtained at operation, sectioned and stained with differential stains. The microscopic investigations consisted of dissections of both preserved and fresh cadavers of infants and adults. A glass model was constructed of the pelvis of a seven months fetus, cut transversely in sections 100 microns thick. An Edinger projection apparatus was used, and the sections traced directly on 8x10" glass plates by means of various colored Higgins inks. Distortion of the model was prevented by keeping the magnification in proportion to the thickness of the sections. The glass plates were then stacked, divided into packs about two inches thick and bound firmly with adhesive plaster. When mounted in a frame, with electric lights behind them, they appeared as colored gela-

* Read before the Section on Urology at the Fifty-first Annual Meeting of the Medical Society of the State of California, Yosemite Valley, May, 1922.

tin molds in a glass case. A preparation of this kind is far superior to a wax model for perineal studies, as it gives a transparent presentation of an entire region, which in this model shows ten structures and their relationships, instead of an opaque representation of a single organ.

EMBRYOLOGY OF THE PERINEUM

The primitive pelvis is divided into a ventral and dorsal half by the fusion of the two urogenital folds which unite throughout their whole length in the median line. This frontal partition is termed the genital cord and appears in embryos between 19.4 and 20 mm. It was formerly believed that sexual differences appeared with the formation of the genital cord, but Spaulding has recently shown that they are present from the be-

Fig. 3.—Transverse section through posterior urethra, distal to verumontanum, of 210 mm. human embryo. A dense fascia surrounds the utricle and ejaculatory ducts, separating them from the prostatic tissue: U, urethra; Ut, utricle; ED ejaculatory duct; P, prostate; PC, peritoneal cavity; D, Denonvillier's fascia. (Embryo, Carnegie Institute, 2402, slide 245, section 2.) X 18.5.

ginning. The rectovesical pouch which extends to the floor of the perineum in a 15.5 embryo reaches just below the level of the verumontum in a 46 mm. specimen (Fig. 1), and at 240 mm. reaches to the middle of the seminal vesicles. In many of the specimens studied the peritoneal pouch was asymmetrical, being slightly deeper on one side than the other.

When the peritoneal layers fuse, the mesothelium is absorbed and disappears, leaving only a bed of mesenchyme. In one 25 mm. embryo there was an apparent raphe as the absorption was not complete; in other specimens showing incomplete absorption the line of fusion was marked by isolated portions simulating cysts—all lying closer to the rectum than to the prostate. In none of the older specimens, where differentiation is more complete, is there any evidence of the persistence of the fused peritoneal layers as a raphe or cysts (Fig. 2).

GROSS ANATOMY OF PELVIC FASCIA

Because of the confused nomenclature, a brief description of the gross anatomy of the pelvic fascia is necessary. This layer is a continuation of the transversalis fascia in front and the iliac fascia on the sides. It is made up of a primary parietal layer and a secondary visceral layer. The parietal layer forms a cylindrical membrane attached above and below to the inlet and outlet of the pelvis, forming the pyriformis fascia behind, the posterior layer of the triangular ligament in front, and laterally the obturator fascia and ischiorectal fascia (or covering of the under surface of the levator ani muscle).

The visceral pelvic fascia is a membranous diaphragm separating the pelvic cavity above from the perineum below and covering the upper surface of the levator ani muscle. This fascia passing inward from the white line on either side forms the lateral ligaments of the bladder, and at the junction of the bladder and prostate it splits into two layers, one passing up around the bladder and the other down over the prostate. The former splits into two layers on either side of the midline to enclose each seminal vesicle and vas deferens, and then bending together continue forward over the bladder to the pubes forming the anterior true ligaments. From that portion of the fascia overlying the seminal vesicles and vasa deferentia arises the layer that forms the outer coat of the ejaculatory ducts and accompanies them through the prostate (Fig. 3).

The prostate has a capsule which consists of a comparatively thin layer of fibrous tissue and involuntary muscle fibers closely adherent to the gland and penetrating the substance. Being continuous with the glandular stroma, it cannot be separated from it without laceration of the gland tissue. It is analogous to the fibrous capsules of the liver and spleen.

The layer of fascia which passes down around the prostate forms a funnel-shaped sheath which is complete except for a vertical band on the anterior surface. Here, because of the extra strain placed on the pelvic floor, due to the upright posture of man, there has been a condensation of fascia and fibrous prolongations between sheath and capsule which unite them so firmly that it is impossible to separate them.

Devonvilliers fascia or the fascia between the prostate and the rectum consists of two layers, one covering the prostate and the other the rectum. These two layers meet above at the vesico-prostatic junction, where they both spring from that portion of the visceral fascia which may be said to stretch across the pelvis between the urogenital apparatus and the rectum. When the rectourethralis muscle is divided the incision should likewise divide the posterior or rectal layer of Devonvilliers fascia,

which is then pushed back with the rectum. Thus is formed the "espace decollable rectroprostatique" or separable space, and the anterior layer of Devonvilliers fascia or sheath of the prostate is exposed. The texture of this resistent membranous layer resembles the dartos, being made up of glistening fibrils most pronounced in the midline.

GROSS ANATOMY OF THE RECTOURETHRALIS MUSCLE

The rectourethralis muscle is of primary importance to the perineal surgeon since it is responsible for the acute anterior flexure of the rectum and the consequent approximation to the apex of the prostate (Fig. 4). A bundle of muscle fibers is sent to the coccyx from the posterior thickened longitudinal band of the rectum, thus forming the recto-coccygeus muscle; and a corresponding bundle arises anteriorly at the level of the verumontanum

Fig. 4.—Transverse section through pelvis of 208 mm. human embryo, showing the relationship between the rectourethralis and levator ani muscles: RU, rectourethralis muscle; LA, levator ani muscle; OI, obturator internus muscle; I, ilium. (Embryo, Carnegie Institute, 2402, slide 261, section 1.) X 7.

and passes to the raphe of the external vesical sphincter, thereby forming the rectourethralis muscle (Fig. 5). This raphe fuses with the under side of the central tendon of the perineum, which lies about 2½ cm. in front of the anus and is formed by an interdigitation of the fibers of the external anal sphincter, the transverse perineal and the bulbocavernosus muscles.

A study of the specimens of the rectourethralis muscle obtained at operation showed smooth muscle fibers at one end flowing into a bed of elastic tissue containing striated fibers at the other.

Contrary to the generally accepted view the levator ani muscle lies lateral to the prostate and is definitely separated from it, and sends no fibers over its posterior surface either directly or indirectly through the rectourethralis.

DISCUSSION

The fascia being merely condensations of connective tissue, have marked individual variations in density. From the urological standpoint they are of interest not only as structural supports, but as protective partitions which guide the paths of extravasations of urine, infections and malignant growths. The perineum has a three-fold protection from extravasation of urine due to rupture of the anterior urethra, the first barrier being Bucks fascia, then Colles and lastly (the anterior layer of) Devonvilliers fascia. The latter is of primary importance in preventing cancer of the rectum spreading anteriorly and effectively confines early cancer of the prostate so that it can be entirely eradicated by means of the radical prostatectomy of Young.

Two anomalies of interest to the urologist were

Fig. 5.—Sagittal section through pelvis of adult, showing diagramatically the relation existing between the external vesical sphincter (EVS) and the rectourethralis muscle (RU); if the dissection follows the posterior surface of this muscle the rectum will be opened, but if the muscle is cut at its junction with the external vesical sphincter the rectum will drop back and the prostate be exposed.

seen in the embryos studies. In the glass model of Embryo 2375 the testicles show in the inguinal canals, the right one being normal, but the left is rotated so that the globus minor lies above and the globus major below. Could not this be the forerunner of a torsion of the testicle?

Embryo 1656 has a long Cowpers duct, whose orifice is near the meatus. This is of particular interest since no adequate theory has yet been advanced to explain the origin of periurethral ducts. In an adult such a structure would undoubtedly be classified as such.

SUMMARY

1. Devonvilliers fascia is not formed by a fusion of the fetal pelvic peritoneal.

2. The rectum, at the level of the prostate, is surrounded by a more or less definite cuff of

connective tissue in which the lowest part of the peritoneal cavity dips.

3. At no stage of development is the peritoneum in contact with the prostate, it always being nearer to the rectum than to the prostate.

4. The recto-prostatic space is filled at first with a synticium or mass of embryonic connective tissue cells; eventually differentiation occurs and there is a condensation of connective tissue anteriorly and posteriorly. The anterior layer covering the prostate is the thicker and the elastic tissue fibrils predominate, thereby causing the shiny appearance characteristic of Devonvilliers fascia.

5. A sheath of fascia surrounds the ejaculatory ducts and utricle as they pass through the prostate.

6. The rectourethralis is a sheet of muscle arising from the external longitudinal layer of the rectum and ending in the raphe of the external vesical sphincter.

7. In exposing the prostate by the perineal route the rectourethralis muscle should be cut close to the central tendon, the incision being sufficiently deep to sever the posterior or rectal layer of Devonvilliers fascia, and the dissection continued anteriorly to the muscle, for if the posterior layer is followed it leads directly into the rectum. If the incision is made anterior to the central tendon the dissection leads first into the venous bulb, causing hemorrhage, and then through the external vesical sphincter. The opening of the rectum is avoided, but there is a prolonged and often permanent loss of vesical sphincter control.

8. Long Cowpers ducts ending near the meatus probably develop as periurethral ducts.

(549 Flood Building.)

Resolution on Medical Ethics—"Solicitation of patients by physicians as individuals, or collectively in groups by whatsoever name these may be called, or by institutions or organizations, whether by circulars or advertisements, or by personal communications, is unprofessional. That does not prohibit ethical institutions from a legitimate advertisement of location, physical surroundings and special class—if any—of patients accommodated. It is equally unprofessional to procure patients by indirection through solicitors or agents of any kind, or by indirect advertisement, or by furnishing or inspiring newspaper or magazine comments concerning cases in which the physician has been or is concerned. All other like self-laudations defy the traditions and lower the tone of any profession, and so are intolerable. The most worthy and effective advertisement possible, even for a young physician, and especially with his brother physician, is the establishment of a well-merited reputation for professional ability and fidelity. This cannot be forced, but must be the outcome of character and conduct. The publication or circulation of ordinary simple business cards, being a matter of personal taste or local custom, and sometimes of convenience, is not per se improper. As implied, it is unprofessional to disregard local customs and offend recognized ideals in publishing or circulating such cards.

"It is unprofessional to promote radical cures; to boast of cures and secret methods of treatment or remedies; to exhibit certificates of skill or of success in the treatment of disease; or to employ any methods to gain the attention of the public for the purpose of obtaining patients."—Abstract from Minutes of the Seventy-Third Annual Session of the A. M. A.

EARLY HOSPITAL HISTORY IN THE UNITED STATES *

By J. B. CUTTER, M. D., Watsonville, Cal.

With universal interest rapidly growing in all parts of the United States, in the upbuilding and expansion of the modern hospital, the following contribution of historical data about hospitals seems timely.

It is probable that the first hospital in the United States was the Pennsylvania Hospital. There were earlier institutions in Canada and Mexico, and efforts were set on foot as early as 1709 to establish a hospital in Philadelphia. In 1730-31 the City Almshouse was founded, and did medical work, but it was not until 1750-51 that the Pennsylvania Hospital had its actual birth. A history of this hospital was published by Dr. Thomas G. Morton in 1895.

A number of physicians and leading citizens of Philadelphia presented a petition on January 23, 1751, to the Provincial Assembly, praying for authority and assistance to establish an institution for the care of "the insane and indigent sick." Dr. Thomas Bond and Benjamin Franklin seem to have been most active in working up public sentiment, and pushing the matter before the Assembly. The hospital was finally granted a charter by the Governor May 11, 1751. Joshua Crosby was the first president of the Board of Managers and Benjamin Franklin, the first clerk.

The charter of the Pennsylvania Hospital, after providing minutely for the government and management of the proposed institution, appropriated the sum of two thousand pounds to be paid in two annual installments, conditioned on the raising of a like amount through private contributions. Two thousand seven hundred fifty pounds were subscribed within a short time, and the hospital was organized.

The Board of Managers then petitioned Thomas and Richard Penn, who were then living in England, to donate a site for the hospital. This request after considerable correspondence was finally granted, but with so many restrictions that the board resolved not to accept the gift. As the need of the hospital was pressing, a temporary arrangement was entered into by which a private house was rented, and opened for patients February 6, 1762.

Negotiations were kept up with the Penns, which finally led to the purchase from them of part of the present site in 1754, and the remainder of the land was given to the hospital in 1767.

A suitable site having been obtained, plans were drawn and approved and the building begun. The cornerstone was laid May 28, 1755, and the building was so far completed by December 17, 1756, that patients were moved into it on that date from the temporary quarters.

In the meantime the first president, Joshua Crosby, died in June, 1755, and was succeeded by

* Read before the Santa Cruz County Medical Society, at its meeting held in Santa Cruz March 6, 1922.

Benjamin Franklin, who served until his appointment as Provincial Agent at London, in 1757.

This is an outline of the early history, as far as authority can be found, of the first hospital in the United States.

The New York Hospital was the second hospital of importance to be established in the United States. Its charter was granted in 1771.

The history of this second hospital is more clear, and its connection with Trinity church adds to its interest.

There is especial appropriateness in the linking of those two ancient New York institutions, for it was in Trinity church that the hospital was conceived, and through the church influence that it came into being. There is spiritual significance in the association of the church with the divinely appointed mission of a hospital at this early period.

Modern medicine finds in the wisdom of ancient Greece its first great exemplars. Hospitals, as we understand the term, did not exist, but the temples of the gods both in Greece and Italy were the refuge of the sick, and there the priests or family of Aesculapius ministered to those ill of body or mind. In full consciousness, as Walter Pater expresses it, of "the religiousness, the refined and sacred happiness of a life spent in the relieving of pain."

Coming down to modern times, we find that light of the early nineteenth century, Walter Moxon, giving expression to much the same thoughts, "sine missione nascimur," we live to a duty, "It (the hospital) is to be to each individual sufferer under our care, all that a man can be to his fellowman in sickness."

In 1123, St. Bartholomew's of London was founded in the same religious spirit, by private funds donated at the solicitation of Prior Rahere. St. Bartholomew's, organized without ecclesiastic connection, naturally commended itself to the colonies in North America. Other early hospitals in England were: St. Gregory's, founded by Archbishop La Franc in 1084; Holy Cross Hospital, Winchester, 1132; St. Mary's, 1197; and St. Thomas', founded by Peter, Bishop of Winchester, in 1215.

In the year 1769, the colony of New York, with a population of 300,000 of whom only 20,000 lived in the city, had not a single hospital. Medical education in the Colonies was almost as backward. In 1767 a modest beginning had been made in New York by the establishment of a medical department in Kings College, now Columbia University. Two years later, in 1769, the graduating exercises of the first recipients of its medical degrees were, by a happy chance, held within the walls of the original Trinity church. A notable assemblage, including the Governor of the colony, Sir Henry Moore, was present. Lasting distinction was given the occasion by Dr. Samuel Bard, a student of Kings College and the London Hospital, a graduate of medicine of Edinborough University, and professor of the practice of medicine in the college, who after addressing the two graduates on the high duties of their profession, eloquently urged on the community the crying need for a general hospital, not only for the care and relief of the sick but also as affording the best and only means of instructing students properly in the practice of medicine.

This moving appeal met with an immediate response, Sir Henry Moore then and there heading a subscription, and many contributions were received. Sir Henry did not live to see his work crowned, but the hospital was organized in 1770, and on June 13, 1771, in the term of his successor, the Earl of Dunmore, a royal charter was granted to "The Society of the Hospital, in the City of New York."

Steps were immediately taken to procure a site. The city offered a tract of three-quarters of an acre near where the present Municipal building stands. Trinity church which, in 1775, had given Kings College its grounds in Park place, offered the hospital a ninety-nine-year lease of a two-acre plot at Canal and Hudson streets. The society decided to buy a five-acre tract of land on an elevated site on the west side of Broadway, opposite Pearl street. Imposing hospital buildings were painstakingly planned and construction was pressed with all convenient speed. A staff of physicians, including Drs. Bard and Jones, was appointed and preparations for the reception of patients were made. But on the 28th of February, 1775, when the building was practically completed, an accidental fire consumed the interior, and, as the New York Gazette and Weekly Mercury described it, "This beautiful and useful structure, at once the pride and ornament of the city, became a ruin." The Governors made a fresh appeal for funds, four thousand pounds was granted by the Colonial Assembly, reconstruction was begun, and within a year the new hospital building was completed.

During the war of the Revolution, the hospital had a stormy career, and passed into the hands of British and Hessian troops, who used the hospital as barracks and occasionally as a military hospital. When the soldiers were withdrawn and the war ended, a tedious period of readjustment ensued, but not until January, 1791, was it that "this asylum for pain and distress," as the Governors feelingly described it, was finally opened for the treatment of patients.

The original structural group, containing about five hundred beds for patients, continued in active use until 1870, when the Governors of the society found the financial burden of maintaining a hospital on that spacious and valuable site too heavy to bear. They accordingly leased the grounds on long terms, vacated the buildings, and a new hospital was built on the present site, where the work of the society's general hospital has since been conducted.

The need for an emergency service in the lower portion of New York City became so acute that what was long known as the "Chambers Street Hospital" was established in 1875. From that date until 1894, when the modern Emergency Hospital was built, 320,000 patients were treated.

The illustrious names of William T. Bull and

Lewis A. Stimson are forever incorporated into the memorable history of this hospital.

The ambulance service was an important part of the work, which all told aggregated the imposing number of 245,000 calls.

The spirit of noble purpose, devoted and altruistic service which moved our ancestors to create and maintain these wonderful first hospitals, has been repeated in many cities of the United States. Will the modern hospital stand on the same high plane of purpose and achievement?

THE CURABILITY OF SYPHILIS *

By VICTOR G. VECKI, M. D., San Francisco

It is due to animal experimentation that we are able to claim that syphilis is a comparatively easily curable disease and able to hope that it may be abolished. All fixed rules, however, and all schedules must be abandoned. A proper diagnosis must be made, but the benefit of any doubt given to the patient. Every fresh case can and must be aborted. The intensity of the treatment is to be regulated by the patient's bodily condition and his tolerance for the remedies.

Minute care in the preparation of the patient, a faultless technic, heeding of any alarm signals and eventual reactions are absolutely necessary in order to finish intensive treatment without damaging the patient. Each subsequent treatment must be more intensive than the preceding one which failed to cure. Neurosyphilis demands slowly increasing doses, especially small first doses whenever vital parts may be involved. So-called parasyphilitic diseases, mainly tabes dorsalis, yield only to long, regular, persistent and proper treatment. The rhythmic, not the desultory, jerky treatment, accomplishes a cure. The intermittent treatment has failed, it must be abondoned and replaced by the continuous treatment, that is, until a cure is realized.

Recent experiences with the use of very small doses of silver-arsphenamin preparations make the use of mercury less and less imperative; it certainly is not very desirable. Kolle's experiments on animals have demonstrated that mercury is active against the spirochetae only in doses that come very near to the fatal ones.

Neosilver-salvarsan is the best arsenic preparation at our disposal, it is easy of solution, very slow to oxidize and is the most parasitotrop and the least organotrop of all antiluetic remedies. We know that silver itself is an antisyphiliticum, its adding to the arsenic has not increased the toxicity, but only the effectiveness of the remedy. The silver molecule activates the salvarsan molecule. The arsenic being the spirillocide, the silver takes the place of the considerably more toxic mercury to make conditions in the tissues unfavorable for the multiplication of the spirochetae.

There is no real evidence whatever of the dangerousness of the silver-salvarsan preparations. Because of neosilver-salvarsan's low toxicity, the total dose in any given case can be reached quicker and safer and therefore the rhythmic, regular and persistent treatment is possible and our prognosis considerably better. Neurorecidives are never seen, intraspinal injections can be abandoned and replaced by draining of the spinal canal immediately after every third or fourth intravenous injection of neosilver-salvarsan.

The neglecting of proper iodide medication is responsible for many failures in the treatment of syphilis. Iodide is very effective when given intravenously.

The colorimetric reaction of Vernes, when once available everywhere, will enable us to reach periodically a quantitative diagnosis and also to judge when a patient really is cured.

We must positively avoid the dangerous condition created by stopping the treatment when almost all spirochetae are destroyed, and thus giving the few surviving clusters more favorable conditions for their pernicious activities. We agree with Vernes when he preaches that one must do too much in order to do enough.

Syphilis could be abolished when the recognizing of it and its effective treatment will be properly understood by the bulk of the profession, when it will not be considered a vice disease, but just a highly contagious one, and when those in power will understand that the proper fighting of this scourge would be by far cheaper than the support of all the hospitals, asylums, orphanages and prisons, populated by syphilitics and their tainted offspring.

(516 Sutter Street.)

* Abstract of a paper on the Curability of Syphilis read by Dr. Vecki at the Fifty-first Annual Meeting of the Medical Society of the State of California, held in Yosemite National Park, May 15 to 18, 1922.

Arizona State Secretary Visitor at Yosemite Meeting—D. F. Harbridge of Phoenix, Arizona, secretary Arizona State Medical Association, was a visitor at the fifty-first annual meeting of the Medical Society of California. Dr. Harbridge read a paper on "Sympathetic Iridiocyclitis—a Case." The author contributes the case history of a patient, who after having the offending eye removed and his oral cavity made sanitary, recovered a vision 6/15 with a —4D. lens. A detailed pathological study by Finoff of the enucleated eye confirmed the clinical diagnosis. The various theories in explanation of the transference of the inflamation from the sympathogenic to the sympathizing eye, the possible relationship to tuberculosis, the very probable influence of an endogenous infection, and the bearing anaphylaxis may offer as a solution of the problem, is discussed.

Goat Gland Hospital for Ensenada—It is reported in the public press that Ensenada is to have a Goat Gland Hospital. The San Diego Cal., Union says: "A corps of surgeons, headed by Dr. Benson of Calexico, has leased the Felix Werbser hotel at Ensenada for 15 years and is converting the building into a hospital. Associated with Dr. Benson, it is said, is one of the foremost surgeons of Kansas City. Hundreds of high class goats are to be shipped from San Diego to Ensenada by boat to furnish glands for patients at the new hospital"!!!

Date of 1923 Session—The Board of Trustees of the American Medical Association announces June 25 to 29, 1923, as the dates for the next Annual Session of the American Medical Association at San Francisco.

HAY FEVER—ITS CURE*

By D. H. TROWBRIDGE, M. D., Fresno, Calif.

My preliminary report of the treatment of hay fever by alcoholic injection was published in 1919 (Cal. State Journal Med., August, 1919).

I feel after treating one hundred and fifty additional patients, justified in the claim that my treatment cures hay fever. My practice is in a climate that is very dry and somewhat dusty—namely the San Joaquin Valley. Consequently there are a great many cases of hay fever. Formerly it was my custom to treat these patients with adrenalin, cocain spray, removal of spurs, and, in years past, by the removal of the turbinate bodies either in toto or in part, as well as by using all other methods of treatment then in customary use. The results were not satisfactory. Realizing the inefficiency of the mode of treatment, I determined to try a suggestion made to me by the late James A. Black of San Francisco—this being that alcohol injected into the nose would cure hay fever. There is no evidence that Black ever used the treatment extensively. If so he did not make further reference to it and I have not found any articles published by him in regard to it.

The first patient treated by this method suffered quite a severe reaction and the symptoms seemed to be much exaggerated for the first few days, after which the reaction subsided and the patient has not had a return of the trouble to this date. Naturally with this encouragement the treatment was carried out on other patients, at first with considerable doubt as to the results. Each patient was treated with the hope that the result might be successful but fearful that it would not be. Now, after several years' use of the alcoholic injection method of treatment, a cure is expected in every patient and failure causes much surprise.

Replies received to a questionnaire sent out in February of this year to one hundred prominent rhinologists in the United States and Canada, show only two men who had ever used the alcoholic treatment for hay fever. One specialist had used it to a considerable extent and a quotation from his letter is given below. The questionnaire was as follows:

How many cases of hay fever have you treated with vaccine?
What kind of vaccine used?
Did you use controls and specific vaccine or stock vaccine?
Kindly give results.
Have you used the alcoholic injection method? How many cases?
What results?

The replies show that a great many rhinologists do not treat hay fever at all, nevertheless they seem to be interested, as many asked for reprints of my paper. About 40 per cent of the answers indicated that they had used the vaccines to a greater or less extent. Some had used stock vaccines from many manufacturers, while others had gone into the matter more scientifically and tested the patient for the specific pollen to which he seemed to react and then treated each patient with a vaccine especially prepared or selected for the individual. The concensus of opinion from the replies received would indicate that those who had used the vaccine in any manner whatever had not been entirely satisfied with the results and that the relief obtained was in not more than fifty per cent of cases. Furthermore the benefit is evidently only temporary lasting perhaps during the season in which the treatment is given, or only while being administered. Certainly my results obtained by the use of alcohol in the treatment of this disease during the past six or seven years have been much better than those obtained by the use of vaccine. While the number of cases is perhaps not so large, many of the cases treated several years ago have had no return of the trouble, although they had been severe sufferers each summer for years previous to the treatment. I now expect about 90 per cent of cures.

Frank R. Spencer of Boulder, Colorado, reported that he had treated several cases with alcohol but did not state his method. He reported some as benefited, others not.

An extract from a letter received from Walter Reedy of Scranton, Pa., gives his experience with the alcoholic treatment. Reedy's plan is entirely different from my own and I quote the following from his letter:

"Injecting the nasal nerve (part of the naso palatine) as they entered the nostrils under the alae nasi. The alcohol was injected on both sides of the fraenum where the mucous membrane is reflected from the upper jaw to the lip. Through infiltration, when successfully done, the nerves are blocked. The patient complains of a numbness of the tip of the nose and upper lip. One patient called it a 'wooden nose.' I have used it in a number of cases of hay fever, rose fever, etc., and where the nerve block has been successful, the results have been good."

My technique has been to inject several minims of 95 per cent alcohol into each lower turbinate beginning at the posterior end and making three or four injections into the body of the turbinate with a long slender needle, also two or three injections of a similar amount of alcohol along the surface of each side of the septum. This is done in each nostril. No attention has been given to any special nerve or group of nerves.

The worst feature encountered in my method of treatment is that it is painful. No local anesthetic has been found that will prevent pain upon the injection of 95 per cent alcohol into the tissue. The patient has no feeling when the needle is inserted, but upon the injection of the alcohol the pain seems to radiate from the nose through the nerves up into the face and superorbital region and for something like a minute or two it is very severe. This is the most disagreeable feature in the treatment and it has kept some patients from receiving the benefit of the treatment who otherwise would have submitted to it. Very nervous patients may, of course, be given a general anesthetic and in the future I expect to use a general anesthetic more frequently rather than try to do the work under local anesthesia.

In most cases there is considerable reaction.

* Read before the Eye, Ear, Nose and Throat Section of the California Medical Association at Yosemite National Park, May 16, 1922.

The mucous membrane is swollen and the patient has a disagreeable sensation of tumefaction for several days, after which it disappears. In many cases, within twenty-four hours the sneezing and disagreeable nasal irritation typical of hay fever disappears permanently. In a few cases the trouble has returned the following season and the patient had to submit to a second treatment. In cases where the results have not been good, the trouble appears to be due to faulty technique by which the alcohol escaped into the throat, or due to improper insertion of the needle, it may have passed through the turbinates and escaped behind into the pharynx. It is not as easy to confine the alcohol entirely to the turbinates as one would suppose and if particular care is not used more or less of it will be lost. When the alcohol is properly injected under local anesthesia, more or less intense pain immediately follows, whereas when it is not properly placed there is no pain. This in one way is a benefit as one can feel assured when the pain immediately follows the injections that the alcohol has been properly placed. Lately I have tried H. M. C. Compound hypodermatically together with local anesthesia which has seemed to lessen the pain somewhat. It is possible that this with local anesthesia will prove sufficient without resorting to a general anesthetic. Submucous resections and other operations may be combined with this treatment.

CASE REPORTS

One case reported in my former paper of August, 1919, was of a young man age 17, who had suffered for years from hay fever, so severe that each summer he was unable to work. He was treated four years ago and within a week was entirely relieved and able to work in the hay field with no return of the trouble. In a recent report he states that he has been entirely cured and is now having no trouble whatever.

Abstracts from the records of a few additional cases are submitted:

Miss H., age about 30 years, complained of hay fever for six or seven years. As a result of the trouble she was compelled to go to the coast each summer. She was given the alcohol injection on June 2, 1919, since which time she has had no return of the disease.

Mr. E., age about 65 years, referred to me by the mother of the young man previously mentioned in the former article. Mr. E. had suffered for twenty-five years from hay fever; had traveled extensively seeking relief and consulted numerous physicians without benefit. One treatment gave him complete relief.

Mr. T., age 19, had suffered for years. Was treated in 1919 and has had no return of the trouble to this date.

Mrs. C., age 19, treated six years ago. She was a severe sufferer from hay fever, practically an invalid during the summer months. A report received from her during the past week advises that she has been practically free from hay fever since the treatment.

Many other cases might be reported.

CONCLUSION

The great benefit of my method is that one treatment is usually all that is required to give permanent relief, whereas with vaccines many injections are required and the treatment must be kept up indefinitely. With the alcoholic treatment I obtain a cure or relief in 90 per cent of cases.

THE EFFECT OF MASSAGE, HEAT AND EXERCISE ON THE LOCAL CIRCULATION*

By ALBION WALTER HEWLETT, San Francisco
(From the Department of Medicine, Stanford University)

Despite the value of physiotherapeutic methods in the treatment of diseases which involve the extremities, we are still relatively ignorant of the manner in which these produce their beneficial effects. This is so largely because the study of joint and muscle functions has hardly advanced beyond the simplest measurements of motion and strength. Broadly speaking, physiotherapy is still in an empiric stage. Its methods have been and are being developed by the method of countless trials in one direction or another. The rational explanation of the results obtained is still fragmentary and scientific studies have not advanced sufficiently far in this field to give to physiotherapy the assistance already given to drug therapy and to treatment by the methods of immunology. None the less, a consideration even of certain functional changes, produced by physical methods of treatment, helps to clarify one's conception of what is happening in the tissues during the treatments.

My interest in this subject was awakened by studies on the blood flow in the arm which were carried out several years ago in association with J. G. Van Zwalenburg and others. These studies demonstrated plainly that the blood flow in the arm was readily and markedly influenced by certain physiotherapeutic procedures and that it was relatively unaffected by powerful drugs given in full therapeutic doses. Though our experiments have been published for some time it may yet be of interest to review the results, together with results of others, on account of the light they throw on certain methods commonly used in physiotherapy.

The arm is composed of skin, muscle and bone, together with various connecting tissues. Changes of circulation which occur in the arm may be assumed to occur under similar conditions at other portions of the surface of the body, where skin, muscle and bone make up the major part of the tissue.

It is well known that heat tends to increase the amount of blood in the heated tissues. The arm is said to swell as much as 70 c.c. when heated. Cold, if not too intense and too prolonged, has an opposite effect. Rings, gloves and shoes fit more loosely when one is chilly and more tightly when one is warm. These changes in volume are accompanied by corresponding changes in the rate of blood flow. The continued application of hot water to the arm increases the local rate of blood flow from four to eight times, and the continued application of cold causes the local rate to fall to one-half or one-fourth of the original. In one of our experiments, for example, the range of blood flow in the arm as a result of thermic influences varied from 2 to 40 c.c. per 100 c.c. of arm substance per minute.

The increased rate of blood flow produced by

* Read before the Section on Technical Specialties (California Association of Physiotherapists) at the Fifty-first Annual Meeting of the California State Medical Society.

heat is not a purely local phenomenon. Shortly after one arm is plunged into hot water the blood flow is increased not only in this arm but also in the opposite one, the latter being less markedly affected. In general the application of heat to any portion of the periphery of the body causes not only a local increase of blood flow but it appears to cause an increased circulation in all portions of the body surface. The response of distant portions of the surface is often so prompt that it must be due in part to nervous reflexes.

Thermic influences may bring about a redistribution of blood in still a third way. This is through an alteration in the body temperature. We know that if a person becomes overheated, the heat-regulatory centers throw into operation all those mechanisms which serve to lower the body temperature. Most important of these is an increased rate of blood flow through the surface covering of the body. This warms the skin and so increases the heat losses from the body. The central mechanism which regulates the body temperature is sensitive to slight alterations in the temperature of the blood which comes to it. If any procedure raises the temperature of the body, even slightly, then the regulatory mechanism tends to send more blood to the periphery of the body in order to reduce the temperature. Thus we see that thermic influences alter the rate of circulation at the surface of the body in three distinct ways: (1) through their local effects, (2) through reflex influences, and (3) through altering slightly the temperature of the blood which goes to the brain.

This latter appears to me to be of paramount importance in securing a good reaction after the cold procedures. Every hydrotherapeutist knows that the patient must not be allowed to become chilly after a cold procedure and the whole technic of general hydrotherapy is designed so as to obtain that feeling of warmth and comfort which characterizes a good reaction. This is accomplished largely by measures which prevent heat losses from the body. The rooms are kept warm, the patient is given a preliminary hot treatment, and the cold procedure is made very brief. The heat added to the body during the preliminary treatment more than compensates for what is extracted during the cold procedure. The temperature of the body is a little elevated; and although the cold procedure by its local effect drives the blood from the surface, the latter soon returns after the cold is removed and the skin remains warm because of the slight increase in body temperature. Vigorous persons commonly forego the refinements of the hydrotherapeutic institute and obtain reactions in cold rooms and without preliminary hot procedures. It appears to me that they are able to do this largely because vigorous exercise during the bath liberates heat within the body. This liberation, combined with a constriction of surface blood vessels during the cold procedure, more than overcomes the tendency of the cold to extract heat from the body. At the end of such a cold bath the body temperature is actually higher than at the beginning and the individual is left with a pleasing feeling of warmth that persists after the bath is over. In the course of the experiments referred to above, I took not a few cold showers after my body temperature had been slightly reduced by prolonged exposure; and I can testify that under such circumstances even one who ordinarily reacts well and who is comfortable during and immediately after the shower is apt shortly to experience intense chilliness that persists until the body temperature has finally been raised to the proper level. Thus it seems to me that one of the essential conditions for an enduring reaction after a cold procedure is a maintenance or even a slight elevation of the body temperature as a net result of the entire procedure. This ensures the continued feeling of warmth and the normal or increased blood flow to the surface that characterizes a good reaction.

The blood flow through the arm is accelerated not only by heat but also by the voluntary use of the local muscles. We found, for example, that the rate of blood flow in the arm may be increased to from three to eight times the resting flow by rapidly opening and closing the fist. Of no little interest are those observations made by others which indicate that this increase of blood flow during exercise depends less upon the mechanical effect of the motion than upon vasomotor effects caused by voluntary innervation of the muscles used. Muscular contractions produced in animals by stimulating the local nerves seem to have been much less effective in accelerating the local blood flow than the muscular contractions produced by voluntary innervation. Furthermore Weber reported that marked swelling of the arm may be produced in motionless persons during hypnotic sleep merely by the suggestion of motion in this arm. Thus it would appear that the marked increase in local blood flow which accompanies muscular movements is due largely to the voluntary effort made to use the muscles. Here we have suggestive physiologic grounds for encouraging a patient repeatedly to make the effort to use an extremity provided use is desired; even though on account of injury or disease he can actually move it very little.

So far as the local blood flow is concerned, massage is not the equivalent of exercise. Exercise causes a marked swelling of the arm due to the increased amount of blood that it contains, but massage produces no appreciable effect upon the arm volume. Under suitable conditions therefore massage should be combined with voluntary efforts on the part of the patient to use his muscles.

We have seen that two types of procedure commonly used in physiotherapy have an extraordinary effect in accelerating the blood flow through an extremity. These are the voluntary use of the muscles and the application of heat either local or general; and I may repeat that no medicine produces an effect even remotely comparable to that caused by these physical methods. It seems to me evident that such a marked acceleration of the circulation as is produced by these means cannot be without influence upon local disease.

EDITORIALS

MEDICAL DEFENSE AND INDEMNITY DEFENSE

The Council on May 18th last, directed the secretary of the State Society to send postal questionnaires to members on the subject of Indemnity Defense. Three questions were asked, as follows:

1. Are you a member of the Indemnity Defense Fund?
2. Are you otherwise insured against malpractice?
3. If so, name of company or companies, with the amount in each company.

Three thousand four hundred and twenty-five cards were sent out and some of the replies received have occasioned this article.

The questionnaire was prompted by the desire of the Council to obtain data which would be of value in meeting adequately a question which merits earnest consideration by each of the society's members; namely, strengthening our organization to resist unmeritorious claims and suits.

These suits are increasing in number; a greater number of cases are being decided in favor of claimants, and the size of judgments rendered in these cases is becoming larger.

Some members of the society, despite the strongest evidence to the contrary, still seem to feel immune to this type of attack on their reputation and property. This fancied security frequently is lost under startling and disturbing circumstances. Our records show that these suits are brought against physicians in all kinds of practice, whether surgeons or not, and without any basis in scientific facts.

Some of the answers received to the questionnaire suggest the following statement: Any member of the society in good standing is entitled in any malpractice case, where his position is meritorious, to payment of all court costs and attorney's fees in his behalf. This protection, available to every member in good standing, is termed Medical Defense. If in such a case, a judgment for damages is obtained against a member, the member must pay such judgment himself; in other words, the society merely furnishes the attorney and pays court costs.

In order to provide for protection against possible adverse judgments, the society established the Indemnity Defense Fund in 1916. Any member in good standing can join this Fund on payment of $15 in cash, and give his note for $15 without interest, payable one year thereafter. In all malpractice claims or cases against a member of the Fund, the society pays all court costs, furnishes the attorneys, and in event of adverse judgment, pays such judgment up to the amount of $5,000 in any one case.

As to malpractice claims and cases, therefore, the society affords two types of service to members; the first, Medical Defense, which includes court costs and attorney's fees, but does not take care of adverse judgments; the second, Indemnity Defense, which includes the payment of all court costs and attorney's fees and any adverse judgment up to the sum of $5,000.

Some of the members ask: "Do you advise me to carry insurance in addition to my membership in the Indemnity Defense Fund?" The council and officials of the State Society have taken a uniform stand on this question, which has been presented to members by letter and articles in the Journal heretofore. If a member has no insurance, he is advised to join the Fund; if he has insurance, he is advised to join the Fund. A member carrying insurance is advised not to drop it, but keep it in force for the reasons above stated. Verdicts in this type of case, when rendered, show a decided tendency to increase in size, typically in certain types of action. Of course, a great deal depends on the doctor's clientele, the character of work done by him, the number and reliability of assistants and numerous other phases, as to which we will be glad to advise any member who will write to this office in detail concerning it.

PROPAGANDA

The subtleties and finer points, as well as the curiously oblique ethics which form the basis of "propaganda" as distinguished from "advertising" on the one hand and "education" on the other hand, are perhaps the most confusing, least understood and yet one of the most important subjects before the public. Propaganda by the ton is being fed to the public daily everywhere, disguised as "news," "education" or "informative publicity."

Physicians should study the subject seriously in their own interests and more particularly in the interests of their friends and patients. This because the broad field of public health and medicine is proving one of the most profitable for "propagandists" who are succeeding to a degree in many instances and by various means in "educating" not only the public, but some physicians in health movements, methods and procedures.

Our mail contains many inquiries from physicians as to the merit of this or that welfare organization, new (?) suggestions, methods or what not. In most of these instances a little investigation and serious thought would have uncovered the truth.

Recently the North American Review published a series of three articles upon this subject and E. K. Strong has a splendid article in the last issue of the Scientific Monthly. Strong says:

"The word 'propaganda' means essentially the spread of a particular doctrine or a system of principles, especially when there is an organization or general plan back of the movement. Propaganda differs from 'education,' with which it is purposely confused, in that in the case of the former the aim is to spread one doctrine, whereas in the case of the latter the aim is to extend a knowledge of the facts as far as known.

"Advertising men have never been able to agree on a definition of 'advertising' and I should not want to attempt here what they have failed to do. But I think we can distinguish between advertising and propaganda by saying that advertising is usually concerned with making known and desirable a definite commodity or service with the definite

aim of leading many individuals, as such, to acquire the commodity or service. Propaganda includes many types of advertising, but it is mainly concerned with the subtle presentation to the public of information so chosen and so focused that among many individuals there develops a general 'point of view' which is favorable to the aim of the propagandist and leads to action in that general direction. A further distinction between these two methods of influencing people pertains to the **methods** employed rather than the **object**. The advertiser buys space upon which appears his message, and the reader knows it as a paid advertisement. The propagandist may advertise, but he especially aims to employ space he did not buy, at least directly, and not to permit the reader to know that the material is propaganda. He believes his material will have greater effect when its source is unknown. . . .

"We are so accustomed to our political machinery that we do not often stop and ask ourselves whether it is geared up so as to serve society in the best way. Only when some enthusiastic social uplifter boasts that she and four others alone put a measure through a state legislature by the use of skillful lobbying, or a secretary of a business man's organization calmly announces months in advance that Congress will do away with a bureau because his organization is demanding such action, and his prophecy comes true, does one wonder whether some sort of control of propaganda would not be worth while even here. And one waxes quite indignant, as did a former Secretary of War, when he comes to realize that much of the propaganda for bringing back the bodies of our dead soldiers was instigated by the journal of the undertakers and casket makers."

He concludes:

"As far as I can see, society has reached the point in its development when it must take motives into account, because man has now learned how to arouse motives to action in an economical and wholesale way. And in regulating motives society must come to evaluate the sentiments that propaganda is aimed to create, and to regulate in some way the use of phrases arousing emotions as distinguished from phrases appealing to rational consideration. Without control in some way of the emotional element in propaganda, legal action will never stop the most dangerous of propaganda which arouses a sentiment first of all and then at the proper moment in one fell swoop precipitates that sentiment into action."

It would be well for physicians as guardians of public and personal health to establish the habit of critical reflection and make a point of fair interpretation for their patients of much that now appears in print as "education," "public health and medicine information." The subjects discussed include practically the entire field of medicine and public health and there is usually a motive and an interested organization just beneath the surface.

VITAMINS

Vitamins should be purchased from the market, the grocery and the dairy instead of the drug store.

Some pharmaceutical houses are spending a great deal of money in efforts to induce physicians to prescribe vitamins. Patent medicine vendors and a host of other quack concerns are spending huge amounts of money in an attempt to "educate" (?) the public as to the great value of vitamins, and, of course, the product offered by each advertiser is the only one that contains the real Simon-pure, life-giving "A" "B" and "C" vitamins.

It is the duty of physicians to inform their patients and it is the duty of the medical profession to inform the general public that the best and most useful and all that is necessary of vitamins can be purchased for a few cents a day from the dairy and the market. Furthermore, it is our duty to tell the public that some of the most extensively advertised and used of these products have not sufficient vitamin "C" to protect guinea pigs from scurvy when given in doses recommended as sure protection for children.

In fact, except under certain special conditions, which can be appreciated only by the educated physician, there is no excuse, except one of financial profit for soul-scarred commercialists, for creating a demand for these products.

HOSPITAL BETTERMENT WEEK IN CALIFORNIA—SECOND ANNUAL CONVENTION OF THE HOSPITALS OF CALIFORNIA.

(Held Under the Auspices of the League for the Conservation of Public Health, Maryland Hotel, Pasadena, September 5, 6, 7, 8, 1922.)

A real post-graduate week of study and instruction in hospital betterment; a program of constructive discussion, question and answer conference, and application for all people interested in any phase of hospital betterment.

During the same week, there will be meetings of the Council of the Medical Society of the State of California; of the Council and officers of the State Society with the officers of County Medical Societies from all parts of the State; and of the Program Committee of the State Medical Society, including the section officers of all sections of the State Medical Society. There will be exhibits, scientific, technical and commercial, showing the best in professional and technical service in California hospitals, as well as the best in equipment, furnishing and supplies.

A strong committee from Southern California, under the chairmanship of Dr. Charles D. Lockwood, is arranging an interesting and attractive social and recreational program. Headquarters will be at the Maryland Hotel, Pasadena. This hotel, as well as others in Pasadena and Los Angeles, have made exceedingly satisfactory American plan rates. The social and get-together features of this convention, as well as the serious sessions, will be very attractive.

Every hospital in California, regardless of its ownership, method of management, whether it is general, special or private, is invited and urged to send as many people as possible to the convention. Each hospital, regardless of its size and character, is entitled to delegates as follows: One representing each of the following: Ownership, directorate, administration, staff, nursing and all other professional and technical departments.

For hotel reservations, address Mr. H. M. Nickerson, resident manager, Maryland Hotel, Pasadena.

For any problem of any kind pertaining to the convention, address Dr. Charles D. Lockwood, chairman Committee of Arrangements, 295 Markham Place, Pasadena, or Dr. W. E. Musgrave, chairman of the Section on Medical Economics, Education and Hospitals, 806 Balboa Building, San Francisco.

SYNOPSIS OF PROGRAM

All meetings will be held in the Maryland Hotel, Pasadena.

First Meeting—Tuesday, September 5, 10 to 12:30.
This meeting will be devoted to special informative 10-minute lectures of vital interest to everybody.

Second Meeting—Tuesday, September 5, 2:30 to 5 p. m.
This meeting will be given over to general consideration of common hospital problems; four speakers,

ten minutes each, each subject to be followed by a general discussion. Meeting to be closed by 30 minutes of questions and answers. Anybody in the audience may ask any questions on any phase of hospital administration.

(This question and answer conference will close every meeting of the convention.)

Third Meeting—Wednesday, September 6, 10 to 12:30. The general subject of this meeting is "The Physical Plant of the Hospital." There will be three 10-minute addresses with free discussions by everybody, and the meeting will close with thirty minutes of questions and answers.

Fourth Meeting—Wednesday, September 6, 2:30 to 5 p. m. The general subject for this meeting will be, "Owners, Governing Bodies and Chief Executives of Hospitals." Again there will be three 10-minute addresses, followed by general discussion, and the meeting to be closed by a question and answer conference as mentioned above.

Fifth Meeting—Thursday, September 7, 10 to 12:30. The general subject will be, "Clinical Departments and Services for both the Hospital and Dispensary. The carefully prepared ten-minute addresses at this meeting will include questions of staff organization in general, as well as by departments; the relation of the general practitioner to the hospital staff; the relation of groups to hospitals and the relation of dentistry to the hospital, together with the usual standard staff departments. The general four-minute discussions will be open to everybody, and the meeting will be closed by the thirty-minute question and answer conference.

Sixth Meeting—Thursday, September 7, 2:30 to 5 p. m. This meeting will be devoted to the General Utility Departments and Services of the hospital. The ten-minute addresses will include pathology and clinical laboratories; the hospital department of public health; the departments of radiology, and the technical departments of physiotherapy, pharmacy, nursing, public health nursing and medical social service, clinical records and library. The four-minute discussions will be general and every one will be invited to take part in them. The meeting will close with the thirty-minute question and answer conference.

Seventh Meeting—Friday, September 8, 10 to 12:30. This meeting will be devoted entirely to the problems of Hospital Administration. The selected ten-minute addresses will cover the field of general administration; finances and accounting; property and supplies and transportation; laundry and linen services; subsistence and dietetics. Four-minute discussions will be open to everyone, and the meeting will close with thirty-minute question and answer conference.

Eighth Meeting—Friday, September 8, 2:30 to 5 p. m. The concluding meeting will be a business meeting, with discussion of reports of the resolutions committee and other committees.

Hospital Betterment Service Bureau

In addition to the regular program, members of the Section on Medical Economics, Education and Hospitals of the League, assisted by experienced persons on every character of hospital problem, will hold special informal conferences every evening at 8 o'clock in the League headquarters at the Maryland Hotel. These meetings are open to all persons, and anyone with any particular hospital problem is invited to present it for discussion and solution at these conferences. Only specific problems will be considered at these 8 p. m. meetings.

OFFICERS AND COMMITTEES, LEAGUE FOR THE CONSERVATION OF PUBLIC HEALTH

Section on Medical Economics, Education and Hospitals

W. E. Musgrave, M. D., chairman; William Ophuls, M. D., John H. Graves, M. D., Percy T. Magan, M. D., Dudley Fulton, M. D.

Officers

Dudley Smith, M. D., president; Granville MacGowan, M. D., vice-president; W. T. McArthur, M. D., secretary; W. B. Coffey, M. D., treasurer; Hartley F. Peart, counsel.

Executive Committee

C. D. McGettigan, M. D., chairman; Walter V. Brem, M. D., O. D. Hamlin, M. D., Saxton T. Pope, M. D., James W. Ward, M. D., Celestine J. Sullivan, executive secretary.

Committee on Arrangements for the Convention

Dr. Charles D. Lockwood, chairman; Bishop Joseph H. Johnson, Good Samaritan Hospital; Mrs. Laura L. Mitchell, Pacific Hospital; Mr. Norman Martin, Los Angeles County Hospital; Dr. N. N. Wood, Los Angeles County Hospital; Miss Melisse Wittler, Methodist Hospital; Mrs. Harriet W. Pahl, Angelus Hospital; Dr. E. T. Dillon, St. Vincent's Hospital; Sister Mary Ann, St. Vincent's Hospital; Dr. Percy T. Magan, White Memorial Hospital; Dr. Joseph K. Swindt, Pomona Valley Hospital; Dr. C. Van Zwalenburg, Riverside Community Hospital.

Rules of the Hospital Convention

1. All meetings are open to the public. Physicians, dentists, physiotherapists, nurses, public health nurses, medical social workers, dietitians, radiographers, laboratory technicians, architects and other persons interested in the Hospital Betterment Movement are especially urged to attend these meetings.

2. The speaker opening a subject will be limited to ten minutes; the discussions will be limited to four minutes each. No discussant may speak more than once upon any topic, and the chair may not grant extension of time beyond the specified limit. General discussion by delegates and visitors invited.

3. Each hospital is entitled to send one official representing ownership; its directorate; the administration; the staff; nursing and all other professional and technical departments.

4. All resolutions shall be presented in writing to the chairman and referred to the Committee on Resolutions, without comment.

Other Meetings Held in Connection With the Hospital Convention

The council of the State Medical Society will hold two meetings (for Councilors only). The first meeting will be held Friday, September 8, at 10 a. m., at the Maryland Hotel. It will adjourn for luncheon at the hotel and continue its session until the business is transacted. The second meeting will be held Friday evening, September 8, at 8 o'clock, at the Maryland hotel. This meeting is for a special purpose and will be an executive session.

There will be a meeting of the Council with State and County society officers, Saturday, September 9, at 12:30, at luncheon in a special dining room at the Maryland hotel. At this meeting it is requested that presidents, secretaries and assistant secretaries and any other officers of county societies from all over the State, meet with the Council and officers of the State Society for discussions of problems affecting the progress of medicine and the welfare of medical organization.

The program committee of the State Medical Society will meet with section officers of each section of the State Society, Saturday, September 9, 10 a. m., Maryland hotel. This is an important meeting, to arrange the program and plans for the next annual meeting of the State Society, as well as for the conduct of the State Society's business, and co-ordinating it with the various section activities of the State Society throughout the year.

Tuberculosis Association and Illinois "State Medicine"—"The Illinois Tuberculosis Association is distributing a pamphlet dealing with the tuberculosis clinic as it is conducted by the association. In view of the fact that many physicians in the State are more or less antagonistic to what is termed 'State medicine,' the Illinois Tuberculosis Association explains in detail the purpose of its clinics.

"'The clinics are diagnostic clinics. They have nothing to do with the treatment of patients. They are held only in conjunction with the county medical society or the local medical profession. The individual local physicians are invited to bring their own patients to the clinics or to express their approval of their patients being invited to the clinics. The clinics are held chiefly with the medical profession, for the medical profession and by the medical profession.

"'Nurses and other arranging clinics are particularly urged not to present patients for examination except with the approval or in the presence of the patient's family physician. When the family physician is unable, for any reason, to attend the clinic where his patient is examined, the nurse is expected to convey to the family physician the diagnosis and suggestions made by the clinician.'"—(Long Island Medical Journal, May, 1922.)

STATE SOCIETY

ABSTRACTS FROM THE MINUTES OF THE 130th, 131st, 132nd AND 133rd MEETINGS OF THE COUNCIL OF THE STATE MEDICAL SOCIETY

(Held at Yosemite National Park, May 15 to 18, 1922)

Madera County Medical Society—The secretary reported that the physicians of Madera County had voted to organize a county society and had requested a charter from the State Society. Upon motion of Bine, seconded by Van Zwalenburg, it was

Resolved, That this newly created medical society be recognized and the secretary authorized to issue a charter to them.

Industrial Accident Law—The question of a circular letter recently sent out by the Industrial Accident Commission requiring every physician to report to the Commission all accident cases treated by him, whether industrial cases or not, was brought up for discussion. On motion of Bine, seconded by Graves, it was

Resolved, That the matter be referred to the general attorney for advice as to whether or not the law requires that every physician report to the Industrial Accident Commission every accident he is called upon to serve;

Resolved further, That if in the opinion of our attorney this is the correct interpretation of the law, he advise the Council of the method of procedure to endeavor to have this law amended.

Appointment of Trustee of Indemnity Defense Fund—The term of office of Rea Smith as trustee of the Indemnity Defense Fund having expired, upon motion of Kress, seconded by McArthur, it was

Resolved, That William Duffield of Los Angeles be appointed to fill the vacancy caused by the expiration of the term of Rea Smith.

Advertisements of Physicians in Newspapers—A letter was presented by the secretary from Dr. ——— in regard to the rather flamboyant advertisements in certain newspapers by certain physicians in Fresno, San Francisco and elsewhere, and asking for our instructions. The secretary stated he had answered the letter to the effect that the matter would be referred to the Council, but that undoubtedly the advertisements in question were unethical. It was voted by the Council that the communication of the secretary be approved and that the advertisements in question be brought to the attention of appropriate local county societies.

Baynes' Article in Woman's Home Companion on the Truth About Vivisection—It was voted that a letter be written to the Woman's Home Companion, commending them on their stand in regard to vivisection.

It was further voted that a copy of the letter be published in the State Journal of Medicine, with an editorial note suggesting to all members that they also write and express their approval of the stand taken by the Woman's Home Companion and the discussion they are giving the question in their publication.

Roster of State Society Members—Discussion was had as to the advisability of printing a roster of members of the State Society for 1922. Upon motion duly made and seconded, it was voted that the Society discontinue the printing of the roster.

New Sections on Scientific Work—The Council having heard the report of the secretary on proposed new sections, upon motion of Bine, seconded by Paterson, it was

Resolved, That the creation of the following new sections be approved, and the secretary be instructed to take the necessary steps to make this action effective:

1. Section on Physiology, Chemistry and Pharmacology, including Physiological Chemistry, Biological Chemistry, Pharmacy, Chemotherapy, and similar allied sciences;
2. Section on Anatomy, including Surgical Anatomy, Embryology and similar closely allied sciences;
3. Section on Applied Biology, including Parasitology, Serology, Immunology and similar closely allied subjects;
4. Section on Dermatology.

Reorganization of the Council—Upon motion of Edwards, seconded by McArthur, C. G. Kenyon was unanimously re-elected chairman of the Council for the ensuing year.

Appointment of Councilor for Third District—Upon motion of Paterson, seconded by Brainerd, Garth Parker of Salinas was appointed to fill the vacancy in the Third District caused by the resignation of T. C. Edwards as councilor for that district.

Indemnity Defense Fund—After general discussion of methods of increasing membership in the Indemnity Defense Fund and of the cost of medical defense, upon motion of Paterson, seconded by McArthur, it was

Resolved, That the secretary be instructed to circularize the members of the society, to ascertain how many are insured in private insurance carriers and the amount of insurance carried.

MINUTES AND PROCEEDINGS OF SECTIONS OF THE FIFTY-FIRST ANNUAL MEETING OF THE MEDICAL SOCIETY OF THE STATE OF CALIFORNIA

(Only part of the Sections have submitted minutes. These are published.)

SECTION ON GENERAL SURGERY

CHARLES D. LOCKWOOD, Chairman
EDMUND BUTLER, Secretary

First Meeting, May 16, 1922, at 8 p. m.—The fourth annual session of the General Surgical Section was called to order by Chairman Lockwood. Following the chairman's address, the minutes of the 1921 session were read and approved. Papers read during the first meeting were as follows: "Amputation Region of the Knee Joint," by Howard H. Dignan of San Francisco; discussed by Emmet Rixford of San Francisco, Leo Eloesser of San Francisco and W. W. Richardson of Los Angeles. "The Hemorrhoid Problem," by Sol Hyman of San Francisco; discussed by H. H. Shirk of Pasadena, G. Rothganger of Oakland, E. Rixford of San Francisco, W. A. Clark of Oakland, LeRoy Brooks of San Francisco, O. O. Witherbee of Los Angeles, W. A. Jones of Riverside. "Migratory Tumors of the Abdomen," by Asa W. Collins of San Francisco; discussed by Burt S. Stevens of San Francisco; "Amoebic Abscess of the Liver," by Horance J. Brown of Goldfield, Nevada; discussed by Herbert Gunn and Herbert Moffitt. The paper of Rea Smith of Los Angeles was not read because of the inability of Dr. Smith to attend. "The Underlying Principles of Plastic Surgery," by J. A. Pettit of Portland, Oregon, was transferred from the May 18 session; discussed by William J. Mellinger of Santa Barbara. "Tumors of the Breast Arising During Lactation and Pregnancy," by Alson R. Kilgore of San Francisco; no discussion.

Second Meeting, May 17, 1922, at 2 p. m.—The meeting consisted in a symposium on bowel obstruction with the following papers: "Indications For and Results of Anchoring the Head of the Colon," by O. O. Witherbee of Los Angeles. Andrew S. Lobingier was not able to attend the meeting. The secretary was notified February 25, 1922, but through some mistake the program was not corrected. "Bowel Obstruction, Diagnosis and Treatment," by Emmet Rixford of San Francisco. "Some Observations on Intestinal Obstruction," by Harold Brunn and George K. Rhodes; read by Harold Brunn. "Bowel Obstruction Following Abdominal Operations Occurring During Convalescing Period," by Alanson Weeks and LeRoy Brooks; read by LeRoy Brooks; discussed by E. C. Rich of Ogden, Utah; W. W. Cross of Fresno, James F. Percy of San Diego, W. L. Huggins of Los Angeles, and J. H. Shepard of San Jose. "Surgical Study of Periarterial Sympathetic Fibers," by C. Latimer Callender; discussed by Stanley Stillman, Leo Eloesser, E. Rixford, H. Brunn, P. K. Brown, E. I. Bartlett, all of San Francisco, and W. A. Clark of Oakland. Adjournment.

Third Meeting, May 18, 1922, at 2 p. m.—Election of officers for the 1923 session. The chairman appointed O. O. Witherbee, W. W. Richardson to act with W. A. Clark, the retiring chairman of 1921, on the Executive Committee. Stanley Stillman of San Francisco was elected chairman. Harlan Shoemaker of Los Angeles, secretary and Leo Eloesser, assistant secretary for 1923.

The following papers were read: "Adenomata of the Thyroid," by John Hunt Shepard of San Jose; discussed by Carl Hoag and E. I. Bartlett. Clarence Toland did not appear to read his paper. "Compression of the Lung in Tuberculosis, Medical and Surgical Aspects," by Leo Eloesser of San Francisco and Philip King Brown of San Francisco. "The Diagnosis and Treatment of Surgical Lesions of the Chest," by Charles D. Lockwood of Pasadena; discussion of the two previous papers by W. J. Kerr of San Francisco, C. A. Warmer of Los Angeles, C. L. Callender of San Francisco, D. Frick of Los Angeles, H. E. Schiffbauer of Los Angeles and O. O. Witherbee of Los Angeles. "False Diverticulitis of the Sigmoid," by Stanley Stillman of San Francisco; discussed by E. Rixford, J. H. Shepard and C. Hoag.

The attendance was very good at all three sessions. W. A. Clark of Oakland moved that a vote of thanks be extended to the chairman, Charles D. Lockwood, for providing a very interesting and timely program.

SECTION ON UROLOGY

G. W. HARTMAN, Chairman
LOUIS CLIVE JACOBS, Secretary

The Urological Section of the Medical Society of the State of California held meetings on May 15 and 16. The program, as published in the May issue of the Journal was carried out, except that the paper of Granville MacGowan of Los Angeles was not read, due to his absence. The Nominating Committee presented the names of Robert V. Day for chairman and Louis Clive Jacobs for secretary for the ensuing year. It was duly moved and seconded that the nominations be closed and the motion was carried. The candidates were then duly elected.

SECTION ON OBSTETRICS AND GYNECOLOGY

HARRY M. VOORHEES, Chairman
L. A. EMGE, Secretary

The following is an abstract of the minutes of the meetings of the Section on Obstetrics and Gynecology. The following resolutions were passed:

1. That one hundred dollars be expended from the "Stenographer's Fund" to cover the expenses of recording and transcribing the discussions of the various papers given.
2. That the secretary of the State Society be notified that all discussions, properly edited, shall be published together with the original article in the Journal of the State Society.
3. That the secretary of the Section on Obstetrics and Gynecology shall keep a registration list of all physicians who wish to take active part in the section meetings.
4. That next year's program shall include at least two meetings in which symposiums will take the place of individual papers.

The symposiums to be on: (1) Sterility, (2) Posterior Positions and Their Treatment, (3) Operative Versus Radiation Treatment of Benign and Malignant Tumors, (4) The Application of Episiotomy and Low Forceps. All those who wish to take part in the symposiums should communicate with the secretary of this Section at once so that special problems may be assigned. The officers elected for the coming year are: Dr. L. A. Emge, chairman, Stanford University Hospital, San Francisco, and Dr. J. Morris Slemmons, secretary, Los Angeles.

SECTION ON NEUROPSYCHIATRY

W. F. SCHALLER, Chairman
W. B. KERN, Secretary

The session was well attended, evidently larger than any previous session. The program was carried out in full. Officers elected for the ensuing year were: Ross J. Moore of Los Angeles, chairman, and Charles I. Tranter of San Francisco, secretary.

SECTION ON ORTHOPEDIC SURGERY

W. W. RICHARDSON, Chairman
G. J. McCHESNEY, Secretary

The first meeting of the Section was held on Tuesday afternoon, May 16, W. W. Richardson, Los Angeles, presiding. After his opening address, a paper by A. L. Fisher, San Francisco, on "Congenital Elevation of the Shoulders With Operation For Cure," was read by Sol Hyman, San Francisco, in the absence of Fisher. The next paper was "The Treatment of Painful Affections Involving the Cervical Vertebrae," by H. L. Langnecker, San Francisco. The third paper was by C. G. Stivers, Los Angeles, the subject being "Re-Education of Crippled Children." The last paper of the afternoon, illustrated by numerous lantern slides, was on "Repair of Tendons in the Fingers," by Sterling Bunnell, San Francisco. H. A. Ryfkogel, San Francisco, did not appear to read his paper as per program.

The second meeting was held on Wednesday evening, May 17. The first business was the election of Section officers, which resulted in the appointment of George J. McChesney, San Francisco, as chairman for the ensuing year, and H. H. Markel, San Francisco, as secretary. As the meeting is to be held in San Francisco, it was thought advisable to have both officers from that city. There being no other Section business the scientific program was continued. James T. Watkins, San Francisco, read a paper on "Dislocation of the Hip Into the Obturatur Foramen." George J. McChesney, San Francisco, read a paper on "The Modern Treatment of the Weak or Flat Foot." A Gottlieb, Los Angeles, read a paper on "Brisement Forces and the Pre- and After Treatment." H. L. Schurmeir, Los Angeles, read a paper on "Congenital Deformities." This closed the meeting, which was regarded as highly satisfactory by all who attended.

SECTION ON INDUSTRIAL MEDICINE AND SURGERY

E. W. CLEARY, Chairman
PACKARD THURBER, Secretary

First Meeting, May 15, 1922—The secretary suggested to the various members that they hand in abstracts of their papers to the Section's secretary early in the year to facilitate preparation of the program. The address of the chairman covered some of the important problems in industrial surgery. The chairman announced that due to illness three of the men scheduled to give papers were unable to attend. The following papers and discussions ensued: "The Necessity for More Accurate Data in the Surgeon's Permanent Disability Report," F. E. Raynes. "Misuse of the Industrial Accident Fee Schedule." Morton Gibbons; discussion by Gayle G. Mosely, Hunkin and Carl Hoag of San Francisco, H. J. Brown of Goldfield, Nevada; E. C. Cleary and Morton Gibbons, San Francisco. A motion was made by Charles Mooney of Santa Rosa that a committee be appointed to draw a resolution to the State Society regarding fees and underbidding. The chairman appointed on this committee Morton Gibbons, San Francisco, chairman; Charles Mooney, Santa Rosa and Philip Stephens, Los Angeles. The next paper was "Resection Distal End of the Ulna For Shortening of the Radius Following Fracture," Carl Hoag, San Francisco; discussion by Spier of Los Angeles, George McChesney, T. J. Watkins, E. W. Cleary and Carl Hoag of San Francisco. So-called "Chauffeur's Fractures" was the subject of a paper by Philip Stephens, Los Angeles; discussion by Langnecker, Hunkin and Stephens, San Francisco.

Second Meeting, May 18, 1922—"The Necessity For An Immediate and Thorough Roentgenological Study of All Injuries to the Spine," H. W. Chappel, Los Angeles; discussion by Schumier, Santa Barbara, Harlan Shoemaker, Los Angeles, Hunkin, Adams and Gould, San Francisco, Chappel of Santa Barbara. Philip Stephens of Los Angeles was elected chairman, and Packard Thurber, Los Angeles, secretary. The committee appointed at the first meeting to draft a resolution on fee cutting made a report. The resolution was passed. (This resolution was published in the minutes of the Council in the July Journal.) "Fracture Pelves With Particular Reference to Dislocation of the Sacro Iliac Synchondroses," Harlan Shoemaker, Los Angeles; discussion by Prince, Hunkin, Cleary, Moseley, McChesney and Shoemaker of San Francisco. "Industrial Medicine and the General Practitioner," Gayle G. Mosley; discussion by Morton, Gibbons, Cleary and Mosley, San Francisco. "Physiotherapy Treatment in Industrial Rehabilitation," A. R. Gould; discussion by Morton Gibbons, Koye, Mellinger, Shoemaker, Adams, Hunkin, McChesney, Gibbons, Cleary and Gould. Harlan Shoemaker of Los Angeles made a motion that a committee be appointed to investigate physiotherapy and report at the next industrial section meeting. The motion was carried and the chairman announced that a committee would be appointed at a later date.

SECTION ON PATHOLOGY AND BACTERIOLOGY

WM. OPHULS, Chairman
R. W. HAMMACK, Secretary

First Meeting, May 16, 1922, at 2 p. m.—Presided over by William Ophuls, chairman. First paper by F. R. Nuzum, Santa Barbara, on "The Effect of X-ray Upon the Structure and Bacterial Flora of the Tonsils"; discussed by Von Adelung, Evans and Ophuls. Second paper by R. B. Hill, Los Angeles, "A Clinical and Pathological Study of Fifty Cases of Hyperthyroidism"; discussed by Rusk, Evans, Ophuls and Hill. Third paper by W. T. Cummins, San Francisco, "Germanium Dioxide and Erythropoiesis"; discussed by Wm. Ophuls. Fourth paper by McArthur of Napa, Cal., "Encephalitis Lethargic"; discussed by Hammack, Cummins and McArthur. Ivan C. Hall of Berkeley was unable to present his paper on "Some Limitations on the Agglutination Reaction in the Indentification of Sporulating Anaerobs." The chairman appointed a committee, consisting of Evans, Rusk and Hammack, to nominate candidates for Section officers. Meeting adjourned at 4:30 p. m.

Second Meeting, May 17, 1922, 2 p. m.—Wm. Ophuls, chairman, presiding. Committee on nominations reported, nominating Walter Brem, Los Angeles, for chairman, and Roy W. Hammack, Los Angeles, for secretary. These candidates were elected officers of the Section for the coming year. The scientific program consisted of symposium on "Coccidioidal Granuloma and Allied Infections." First paper by E. C. Dickson of San Francisco, "A Report of Cases With Especial Reference to Meningeal Involvement." Second paper by G. Y. Rusk of San Francisco, "Coccidioides Immitis as a Cause of Meningitis With Hydrocephalus." Third paper by Roy W. Hammack and J. M. Lacey of Los Angeles, "Cases Observed in Southern California."

Fourth paper by N. G. Evans of Loma Linda, "Torula Infection." These papers were discussed by Brem, Taylor, Ophuls, Dickson, Rusk, Hammack and Evans. Meeting adjourned at 4:30 p. m.

SECTION ON TECHNICAL SPECIALTIES

RAY LYMAN WILBUR, Chairman
HAZEL E. FURSCOTT, Acting Secretary

The first meeting of the Technical Specialties Section of the California Medical Society was held at Yosemite, California, May 5, 1922, 2 p. m. The chairman's address brought out the necessity for the general practitioner to be familiar with therapeutic agents other than medicine. The fields of physiotherapy, dietetics, laboratory technique, and social service have been long recognized as specific treatment in the care of the sick, but had become subordinate because of the unfortunately limited connotation of the word medicine. The physician should know how to use and prescribe in these fields, but he cannot be expected to learn all these technical branches. For that reason the technician must be trained. In physiotherapy adequate training is necessary to combat the credulity of the public in chiropractic and other cults. He pointed out the danger of the dietetic fanatic and encouraged the scientifically trained dietician to supplant the former. The relation of the home and social conditions of the patient he showed to be an important factor in the health program; he urged that the medical social worker be used to meet this need. Charles Pinkham, secretary, Board of Medical Examiners of the State of California, maintained that educated physiotherapists would be the solution of cultism. J. T. Watkins of San Francisco pointed out the dangers of the inadequately trained nurse in physiotherapy; referring to the situation and tendencies in this direction of certain organizations. Langnecker of San Francisco made a plea for the training of physicians to intelligently prescribe physiotherapy. Hazel Furscott emphasized the fact that the nursing profession prefers to keep its identity and is not interested in encroaching on the physiotherapy field except after adequate supplementary training. Edna Shirpser, secretary of the California Association of Medical Social Workers, thanked Dr. Wilbur for his interest in the medical social service and Florence Atkinson expressed the gratitude of the California Association of Physiotherapists. This discussion was followed by a business meeting for the election of officers for the ensuing year. Ray Lyman Wilbur was unanimously re-elected president, and C. LeRoy Lowman of Los Angeles, secretary.

THE CALIFORNIA ASSOCIATION OF PHYSIOTHERAPISTS

HAZEL E. FURSCOTT, President
FLORENCE E. ATKINSON, Secretary

The first annual meeting of the California Association of Physiotherapists was held May 17, 1922, 10 a. m. After preliminary remarks by the president, outlining the organization of this association, its activities during the past year, and its plan for future development, Ray Lyman Wilbur, in a thoughtful address on "Educational Standards in Physiotherapy," struck the keynote of the situation in his discussion of the fundamental and technical needs of scientific physiotherapy. The discussants, Morton Gibbons, E. W. Cleary, H. L. Langnecker and J. T. Watkins, felt that Dr. Wilbur had so adequately defined the needs of the situation that they could add nothing but their hearty commendation. The paper by A. W. Hewlett of Lane Hospital on "The Effect of Massage, Heat and Exercise on the Local Circulation," exemplified in detail the necessity for definite scientific research. Spiro in his discussion of Hewlet's paper brought out the point that the feeling of well-being was an important result of stimulation of the circulation. An informal discussion on "Early Physiotherapy Treatment of Fractures," led by Carl Hoag of the University of California Hospital, showed the advantage of different physical therapeutic agents. T. J. Watkins, Gibbons, Kapp, Gottlieb and Mabel Penfield agreed on the general advisability of the procedure. A suggestive point brought out by this discussion was the use of diathermic heat and electric stimulation during the period of immobilization in cast or splint. "The Standardization and Uses of Physiotherapy Equipment" was presented by Mahel Penfield, physiotherapy technician of San Francisco. Her paper contained a fund of detailed information useful to both physician and technician. In the discussion that followed Carl Hoag emphasized the importance of the personality of the physiotherapist over that of apparatus. George Evans of San Francisco stated that physiotherapy was now largely utilized by certain specialties of medicine. He made a plea for the enlargement of the physiotherapy activity to include the patients from all fields of medicine. Other discussants were Kapp and Gottlieb. Hazel E. Furscott, Physiotherapy Department, University of California Hospital, presented a paper on "Physiotherapy Records," illustrated by a complete set of measuring apparatus and lantern slides. The paper showed clearly that these records of progress furnish a definite encouragement of the patient, illustrates the responsibility of the technician to the physician, and establishes the value of physiotherapy records in the advancement of science. At the annual business meeting the following members were present: Hazel E. Furscott, Florence E. Atkinson, Mabel Penfield, Mary Schaaf, Florence Burrell, Sarah R. Davis, Laura McAllister. Acting on ideas for future development of physiotherapy set forth in Dr. Wilbur's address, a resolution was passed unanimously that this association form a committee to draw up a resolution expressing its desire to formulate and conduct an examination for a certificate of approval of this association for trained physiotherapists; the examination to be such as will be approved by a special committee of the State Medical Society, the object being to stimulate proper educational facilities for the training of future physiotherapists.

CALIFORNIA ASSOCIATION OF PHYSIOTHERAPISTS

President's Address

HAZEL E. FURSCOTT, San Francisco, California

It is, indeed, a great pleasure to call this first annual meeting of the California Association of Physiotherapists. The association was organized last May for the purpose of establishing and maintaining adequate standards in physiotherapy, and afford the members of the medical profession a group of educated, trained ethical technical assistants. At the present time we have forty-three active members and nine associate members. The most distinctive feature of the past year was a stimulating series of monthly scientific programs. In addition to the contributions by our own members it was our good fortune to have as speakers Doctors Naffziger, Pope, Cleary, Mehrtens, McChesney, Dudley Smith, Markel, Schaller, Tranter, and Hoag.

During the past year many problems have confronted us which we have endeavored to overcome. Outstanding among these were:

First — A gradually decreasing number of educated physiotherapists, due to the lack of adequate educational facilities.

Second—The discrimination in the selection of membership between the educated, trained, physiotherapist and the unethical pretenders.

Third—The need for correlation of existing data and for research.

To meet these needs a survey was planned and workers appointed to gather the necessary information on which to build a foundation for scientific progress.

First—To survey the schools of Europe and America, giving courses in physiotherapy or related subjects.

Second—To survey educational and practical conditions of physiotherapy in the state of California.

Third—To draw up a complete bibliography of physiotherapy literature.

It is the intention of our association to publish this survey when completed.

It would have been impossible to have carried through the past year without the co-operation and assistance of the officers of the Medical Society of California and the League for the Conservation of Public Health.

CALIFORNIA ASSOCIATION OF MEDICAL SOCIAL WORKERS

The first annual meeting was held May 17, 1922. Edna J. Shirpser presided. A paper on "Medical Social Service in the Hospital" was read by Marguerite Wales, director social service, Stanford Hospital. Ray Lyman Wilbur discussed "The Relationship of Social Service to the Medical Profession." "The Place of Medical Social Service in Hospital Organization and the Duties of Medical Social Workers Toward Hospital Administration" was the subject of a paper by Frank R. Nuzum, Cottage Hospital, Santa Barbara. The important subject of "Social and Economic Diagnosis" was discussed by C. H. Arnold, Stanford Hospital; F. R. Nuzum, Santa Barbara; Alvin Powell, Oakland; T. C. Lyster, Los Angeles; F. W. Hodgdon, Jr., Pasadena; Mrs. McManus, State Board of Health, and Marguerite Johnson, Telegraph Hill Clinic, San Francisco. At the business meeting Marguerite Wales was elected president, Josephine Abraham vice-president, Edna J. Shirpser secretary and treasurer for the ensuing year. The following directors were elected: Lillie Lindsay, Regina Horton, Eleanor Stockton and Rose Steinhart.

Stanford Establishes Course of Instruction for Physiotherapists—There has recently been instituted in Stanford University Hospital, a course of study for the training of technicians in physiotherapy. This course is designed to give adequate theoretical and practical knowledge to those persons who want to have efficient training in this branch of medical treatment carried on under the supervision of the medical profession. It is also open to members of the medical profession who may be interested in acquiring familiarity with the methods and results of the various forms of physiotherapy. The course has been instituted to meet a strong demand for wider universal knowledge of physiotherapy in its application to rehabilitation and industrial accident work.

COUNTY NEWS

ALAMEDA COUNTY

Alameda County Medical Association (reported by C. L. McVey, secretary)—The general meeting of the Alameda County Medical Association was held on June 19 at the Public Health Center.

S. Everingham read a paper, "Fractures—Their Early Treatment.' P. F. Abbott presented a case of Mikulicz's Disease. W. A. Wood and Ann Martin discussed the following subjects, "Clinical Importance of the Schick Test. Toxin, Anti-Toxin Treatment." The Ethel Moore Memorial Building of the Alameda County Health Center will be completed about August 1, 1922.

New Maternity Department for Fabiola Hospital—According to Mrs. J. P. H. Dunn, president of the Fabiola Hospital Association, a contract has been let for a new maternity department for Fabiola Hospital to cost $200,000. The maternity department is to be modern and complete in every respect and is to have fifty beds.

$700,000 Hospital for Oakland—The Providence Hospital Association has purchased the Bancroft Block in Oakland and the Sisters of Providence Hospital announce that they hope to begin the erection of the new $700,000 building this year. Nineteen years ago the Sisters of Providence Hospital Association came to Oakland and they have operated the present hospital since that date. Providence Hospital of Oakland is one of a chain of hospitals, extending through Canada, the Northwest, and south to Oakland, California. The Mother General is at the head of the main hospital in Montreal, Canada.

BUTTE COUNTY

Enloe Hospital, Chico—Dr. N. T. Enloe has again assumed charge of the management of the Enloe Hospital. Dr. N. T. Enloe, Jr., who has been managing the hospital for the past year, is devoting his entire time to the automobile business.

FRESNO COUNTY

Fresno County Hospital Accredited by Council on Education and Hospitals of A. M. A.—The Fresno County Hospital has been accredited for the instruction of intern in a letter of June 17 to Dr. H. O. Collins, director of the hospital. The letter reads in part as follows:

> "We are sure that you realize how much we are interested in the good work which the hospital is doing. It has been a pleasure to note from time to time the really important strides which have been made within the last few years as they have come to our attention from you directly and especially through the very thorough and conscientious work of Dr. Musgrave.
>
> "Along with our recognition of your hospital on our list of hospitals approved for internship there is an interest that will not be in any sense abated, and I assure you that the future progress of your hospital will be a matter of great interest to us and I hope to hear from you from time to time."

This accredited standing was made upon the recommendation of the Council's committee in California, which is the section on Medical Economics, Education and Hospitals on the League for the Conservation of Public Health.

Dinuba Sanitarium Sold—H. T. Haden has purchased the property of the Dinuba Sanitarium from Charles Weddel for $30,000.

Selma Sanitarium Now Open For Patients—A new sanitarium at Selma has at last been finished and is now operating. The Board of Directors are: O. W. Steinwand, secretary; Mrs. Maude Scott, treasurer; C. W. Christenson, J. P. Olsen and P. H. Hansen.

KERN COUNTY

Jefferson Hospital—Drs. Hawkins and Edgerton have opened a new hospital of twenty beds in Taft at Fourth and Lucard streets. Miss Nan Rector is superintendent of this new hospital. The basement of the building contains the nurses' quarters, kitchens, storerooms, etc., while the main floor is given over to patients' beds and office space. Drs. Hawkins and Edgerton state that their hospital is open to all physicians upon equal terms.

Kern County Hospital—It is reported that the Board of Supervisors of Kern County have purchased a site for the new County Hospital. Plans for the hospital, which with the new juvenile home and home for indigents will cost approximately $400,000, are now being drawn.

LOS ANGELES COUNTY

Barlow Sanitarium Receives Bequest—By the terms of the will of Mrs. Lucia W. Jennison of Covina, the Barlow Sanitarium was left a $5000 bequest as a memorial to her husband and son.

Golden State Hospital—J. Rollin French and C. E. Early operate this hospital in connection with their industrial, surgical and restoration institution. According to the Los Angeles Express this hospital has recently been very much enlarged and improved in many ways.

Hollywood Hospital—Architect Robert H. Orr has been commissioned to prepare plans for the new Hollywood hospital to be located on Vermont avenue near Sunset Boulevard. The Hollywood building is to be four stories and basement, covering an area of 8700 square feet.

Municipal Hospital for Long Beach—A meeting was held on July 11 of all persons interested in hospital work for the city of Long Beach. Long Beach has recently voted a bond issue authorizing the city to construct a hospital. Councilman Fillmore Condit, head of the City Hospital Committee, presided.

Ministers of Long Beach Request Service for Sick at Cost—A Long Beach Ministerial Union recently passed the following resolution:

"Whereas, It is customary in most Christian communities to provide hospital facilities for the sick and injured on a non-profit basis; and

"Whereas, A movement is on foot in Long Beach to make such a provision possible in this community;

"Resolved, that the Ministerial Union of Long Beach appeals to the Seaside Hospital Association to lead in the organization of a community hospital association upon a non-profit dividend basis to serve the interests of our city under a just and equitable recognition of the rights of the present owners of the Seaside Hospital property."

Harbor Hospital Association of San Pedro—The physicians of San Pedro are making an effort to build and operate a satisfactory hospital at San Pedro. Over $50,000 has already been subscribed and the association has $21,000 on deposit. The site has been purchased at Tenth and Meyler streets and the foundations are already under construction. The present board of directors is made up largely of Long Beach and Los Angeles stockholders. These stockholders have expressed their willingness to turn over to the San Pedro physicians their holdings as well as the management of the institution wherever San Pedro physicians are in a

position to accept the responsibilities. Dr. Rodgers of San Pedro is taking a leading part in the activities of this hospital.

Murphy Memorial Hospital—The Forum Club of Whittier recently held a meeting to discuss the future of the Murphy Memorial Hospital. This hospital, originally constructed by Colonel Murphy, was donated to the municipality of Whittier under certain conditions.

Permanent Quarters—Harlan Shoemaker, secretary of the Los Angeles County Medical Society, reports progress with their permanent building fund. This is a most worthy movement which should have the endorsement and support of all members.

Barlow Library Notes—Barlow Library is maintained by the medical profession. Our own people pay the bills! You are welcome to use it, without money and without price. But a ten-dollar or a twenty-five-dollar membership is appreciated. If you wish to become a member send your check to the librarian, and watch the results. Try it once, anyway.—(L. A. Med. Soc. Bulletin.)

Cottage Hospital, Burbank—Miss Cecil Williams, former owner of the Cottage Hospital, has sold it to Miss Grady Weems, Miss F. Short and Miss Beulah Newton. Miss Weems is the superintendent, Miss Short will be in charge of the surgical department and Miss Newton will act as superintendent of nurses.

Lamanda Park Hospital—Dr. J. B. Keaster has purchased the property at 2563 East Colorado St., and is converting the present building into a hospital of which he is the owner and director.

New Hospital for Torrance—A bequest of $100,000 was left in the will of the late Mr. Torrance for the erection of a hospital at Torrance, the town which he founded. The details of the bequest have not yet been made public.

Additions to St. Vincent's Hospital—The Sisters have decided to build an annex to cost $300,000 to St. Vincent's Hospital. Mr. J. S. Austin, architect, states that the annex will be eight stories high and contain one hundred beds.

Culver City Hospital—F. M. Hull, M. D., will shortly erect a five-bed hospital on Putnam avenue. The new hospital will be provided with laboratory and X-ray equipment.

MARIN COUNTY

Marin County Medical Society (reported by Chester A. De Lancey, secretary)—At the last meeting of the Marin County Medical Society it was voted to take under consideration the questionnaire concerning industrial medicine. This action was taken in order to gain further information on this subject which it is expected will appear in an article in the State Journal of Medicine.

Arthur Mays, who was a delegate to the State convention, gave an interesting account to a special meeting of the society of the different meetings at Yosemite.

Hans Lisser of San Francisco favored the society with an address on Endocrinology. He pointed out that pluriglandular therapy is useful only when constructed on monoglandular therapy in given individual cases. He also pointed out the necessity of telling patients at the outset that glandular therapy extends over many months. Many new and interesting points on endocrinology were presented to the society.

San Rafael Cottage Hospital—The San Rafael Cottage Hospital is reported to be installing a delivery room for the maternity department.

MONTEREY COUNTY

Monterey Sanitarium—Dr. Martin McAulay has converted the old Governor Pacheco adobe residence into a hospital, equipped with operating room, X-ray and other departments.

NAPA COUNTY

Walter Springs Health Resort Sold—The Walter Springs Health Resort, controlling the output of the Walter Springs Water, has been sold to Mr. Van Hovenberg of San Francisco. Mr. Van Hovenberg proposes to make this one of the attractive resorts of California.

ORANGE COUNTY

Orange County Medical Society (reported by Rowland P. Yeagle, secretary)—At the regular meeting of the society for April, held in Santa Ana, the following officers were elected for the ensuing year: President, James C. Crawford, Orange; vice-president, Bessica F. Raiche, Anaheim; treasurer, William C. Duboid, Santa Ana; secretary, Rowland P. Yeagle, Santa Ana; librarian, John Wehrly, Santa Ana; board of councilors, J. H. Lang, Fullerton, G. A. Shank, Huntington Beach, C. D. Ball, Santa Ana.

Orange County Hospital To Have Addition—Plans are under way to build a psychopathic ward in connection with the Orange County Hospital. The new addition will cost $28,000. H. E. Zaiser, M. D., director of the hospital, states that the new department will be made as free from any appearance of restriction as it is possible to make it. A courtroom will be provided in connection with the addition.

PLACER COUNTY

Placer County Medical Society (reported by Robert A. Peers, secretary)—The Placer County Medical Society met in Auburn, at the Masonic Temple, July 8, 1922. Charles J. Durand, the president of the society, occupied the chair. The following members and visitors were present: Members—Drs. Durand, Miner, Peers, Rooney, Mackay, Fay, Talbot, Horne and Russell. Visitors—Wiltse, Auburn; Kanner, Colfax; Whittington, Weimar; Ward, Auburn.

H. M. Kanner of Colfax, Dwight Davis Johnson of Grass Valley and William L. Whittington of Weimar, a member of the Alameda County Medical Society, were elected to membership in the society.

The following members were endorsed for industrial insurance work—W. P. Sawyer, Nevada City; J. Gordon Mackay, Auburn; J. A. Russell, Auburn; William A. Lavery, Loyalton; George Howard Fay, Auburn; A. H. Tickell, Nevada City; E. R. Brooks, Floriston; Frank Lisle Horne, Auburn; Earl E. Ostrum, Loomis; J. Suley Wheeler, Lincoln.

Case reports were made by the following members: Miner, Kanner, Mackay, Talbot, Rooney, Peers and Whittington.

Robert F. Rooney of Auburn read the paper of the evening entitled "Over Fifty Years in Medicine," in which he traced the history of medical discoveries during his fifty-two years of practice. The doctor also spoke of his many personal experiences during this time. He also paid his respects to the various cults and fads of that period. He finished by reciting a poem, written by himself, entitled "The Old Practitioner." Rooney's paper was enthusiastically received and was discussed by all those present. The remainder of the evening was spent in reminiscences.

PLUMAS COUNTY

New Sanitarium at Quincy—Dr. W. W. Peterson is constructing a sanitarium at Quincy. Dr. Peterson will have charge of the Feather River Lumber Producers' Association practice.

RIVERSIDE COUNTY

Riverside Community Hospital, Election of Board of Directors—At the annual meeting of the Riverside Community Hospital Association the following directors were elected for the ensuing

year: W. B. Clancy, Mrs. George Cole, E. M. Doyle, Lyman Evans, S. C. Evans, T. F. Flaherty, J. T. Garner, Stanley F. Henshaw, Rev. R. A. Kirchoffer, Alfred M. Lewis, Frank A. Miller, F. T. Morrison, Mrs. Julia Moulton, Mrs. A. N. Sweet, A. B. West. The annual report of the Secretary showed the subscriptions towards the new hospital $189,519.26, subscribed by 2,314 persons.

New Medical Director of the Riverside County Hospital—Dr. W. A. Jones of Arlington has been appointed. Dr. E. H. Wood, former director, has had to give up the work for the present on account of ill health. Miss Jessie Twogood will continue to act as head nurse and Mrs. Margaret Carroll as housekeeper and business manager.

Hillcrest Hospital Has New Director—Dr. J. A. Ramsay will be general manager and chief physician to Hillcrest Hospital, Hemet. Dr. Gregory, former director of the hospital, has retired from its active management.

SACRAMENTO COUNTY

Sutter Hospital—I. W. James, M. D., Secretary of the Board of Directors, announces that the contract for the construction of the new Sutter Hospital has been awarded to George Wagner of San Francisco. The hospital is to be located on L Street between Twenty-eighth and Twenty-ninth Streets.

SAN BERNARDINO COUNTY

Upland Hospital (Paul Memorial Hospital)—At the annual meeting of the board of directors of this hospital held recently, E. W. Paul was elected president; E. H. Richardson, vice-president; Thomas W. Nisbet, secretary; Harold C. Moore, treasurer. Other directors are: Dr. W. H. Craig, Mrs. James L. Paul, G. A. Hanson, W. K. Beattie, Dr. J. H. Titus and A. H. Johnson. Plans for this new hospital, which is to cost $110,000, have at last been approved, and there is a campaign on at the present time to increase the funds on hand sufficiently to open the institution without debt.

SAN DIEGO COUNTY

San Diego County Medical Society (reported by Robert Pollock)—The San Diego County Society will hold no scientific sessions during July and August. It plans to promote goodfellowship preliminary to the fall sessions by holding a picnic for the members and their families late in August. The prevailing epidemic in San Diego and vicinity at present seems to be acute polydipsic golfitis. No fatalities have as yet been reported, although restrictive measures are contemplated by the authorities. The County Society tendered a banquet to Ernest Fuchs of Vienna during his brief stay in San Diego while enroute to San Francisco, where he delivers a course of lectures on opthalmology. Dr. Fuchs' address was replete with practical diagnostic points related to every-day eye conditions that confront the general practitioner.

Alpine Sanitarium Under New Management—Paul M. Carrington, M. D., has taken over the management of the Alpine Sanatarium at Alpine, San Diego County, and will continue it as an open-staff hospital. Its location admirably fits it for the treatment of the tuberculous and asthmatic as well as those suffering from nervous and nutritional disorders.

Addition to Paradise Valley Sanitarium—About 500 people attended the laying of the cornerstone of a new 50-bed addition to the Paradise Valley Sanitarium at National City on the afternoon of July 2. The exercises were presided over by Alton D. Butterfield, medical director of the institution, and the address of the day was delivered by Percy T. Magan of Los Angeles, member of the hospital betterment committee of the League for the Conservation of Public Health for Southern California. The new building will be of fireproof construction, and will be devoted to surgery and obstetrics.

Proposed Escondido Cancer Hospital—It is reported that Dr. L. T. A. Hotten of Escondido has asked permission of the city trustees to solicit funds to build and operate a cancer hospital at Escondido. It is further reported that the board referred the matter to Dr. Lorini, Health Officer, for recommendation, and that Dr. Lorini gave his consent for the soliciting of funds for the hospital from the public.

SAN FRANCISCO COUNTY

San Francisco Board of Health Replies to Criticism of the San Francisco Hospital—The Board of Health takes exception to the reported statement of the foreman of the grand jury that "deplorable conditions" exist at the San Francisco Hospital and that "poor patients are miserably treated." In an open letter, President Barendt says:

"In a large institution such as the hospital, there cannot help but be occasional infractions of the rules by some of the employes, visiting or attendant physicians, but to condemn an entire institution for the infraction of a rule shows the utter unfitness of the critic in this case to occupy the position which he does.

"I have been unable to find that any of the grand jury for whom Jungblut professes to speak have visited the hospital or have mentioned to anybody in what the 'deplorable state of affairs' consists.

"I have only to invite the members of the grand jury to visit the hospital whenever they please and —with due regard to the feelings of the patients— to make their rounds wholly unattended and to investigate it from garret to basement."

SANTA BARBARA COUNTY

Celite Hospital Destroyed by Fire—On May 25, at one o'clock in the morning, Celite Hospital at Lompoc was discovered to be on fire and very quickly burned. No lives were lost. Mr. Smith, the superintendent, states that it will be reconstructed.

SANTA CLARA COUNTY

East Columbia Hospital, San Jose, Has New Director—Dr. Frank H. Paterson has turned the management of the East Columbia Hospital over to H. D. Jenkins. According to newspaper dispatches Jenkins plans to make a number of improvements in the physical plant and is quoted as saying that the future of the hospital is to be built upon two words, "service" and "business."

San Jose Physicians Form Luncheon Club—The physicians of San Jose have formed a luncheon club to meet every Tuesday. H. C. Brown is president and R. S. Kneeshaw secretary of the club. It is proposed to have prominent guests attend as many as possible of these meetings, to discuss matters of interest to physicians.

SISKIYOU COUNTY

Siskiyou County Abandons Plan for County Hospital—Supervisors of Siskiyou County had plans plans well under way for construction of a $200,000 hospital, to be located at Yreka. A delegation of taxpayers appeared before the supervisors to demand that all plans be abandoned. The supervisors decided to do so for the present.

SOLANO COUNTY

Vallejo General Hospital—This new hospital is located at the corner of Tennessee and Sutter Streets in Vallejo and is now open for patients.

SONOMA COUNTY

Sonoma County Hospital—Plans are under way for the erection of a department to the Sonoma County Hospital for the care of patients suffering from tuberculosis. The plans were advanced at a meeting held in the offices of Dr. P. A. Meneray for the discussion of problems connected with this work.

Hillside Hospital—This Hospital, located at Petaluma, has been sold to Carl Haderman, who will take immediate possession. Mrs. Johanna Petersen will be superintendent. Mr. Haderman states that he will continue to run the hospital as a first-class institution.

STANISLAUS COUNTY

Oakdale Hospital—The municipal board of trustees of the proposed Oakdale Hospital has been organized. The directors are: E. T. Gobin as president of the board and R. L. Acker as secretary; the other members are A. L. Gilbert, Mary Roberts, Ed Rodden, Mary Lambuth, W. A. Patterson and L. C. Kaufman. The board decided to build a sixteen to twenty-bed hospital, two stories high, at a cost not to exceed $30,000 for building and equipment.

Temporary Hospital—Physicians of Oakdale have joined in establishing a temporary hospital in a home, pending the completion of the proposed municipal hospital. The dwelling being used for temporary purposes is being improved and will take care of five patients when ready for occupancy.

TULARE COUNTY

Instructions for Mothers in Hygiene at Dinuba—Newspapers report that the Dinuba Chapter of the Red Cross, under the leadership of one of their school nurses, is planning to give a course of instruction in hygiene to the mothers of Dinuba. Mothers who take 18 hours of the instruction will be given a certificate.

VENTURA COUNTY

St. John's Hospital Organizes a Staff—The staff of St. John's Hospital, Oxnard, has been organized, with the following officers: John G. Norman, president, and Raymond T. Francis vice-president and secretary. The staff is to meet once a month.

YOLO COUNTY

Tuberculosis Survey in Yolo County—It is reported that a public health nurse is arranging for a tuberculosis survey of Yolo County and that she will call in expert assistance from outside to assist her in making examinations and tests. According to newspaper reports, the object is not so much to acquire statistics as it is "to assist those who are tubercular or showing signs of the dread disease in combating it in its early stages."

Is it possible that the physicians of Yolo County are not essential in making diagnoses or giving treatment to tuberculous patients in that county?

Printer Was Peeved—A printer in Fort Worth, Texas, got slightly peeved at a letter from a doctor who wanted bids on several thousand letterheads, different sizes, different grades, and different colors, and wanted the printing form held standing. So he took his typewriter in hand and wrote:

"Am in the market for bids for one operation for appendicitis. One, two or five-inch incision—with or without ether—also with or without nurse. If appendix is found to be sound, want quotation to include putting same back and cancel order. If removed successfully, bidder is expected to hold incision open for about 60 days, as I expect to be in the market for an operation for gallstones at that time and want to save the extra cost of cutting."—Kansas City Post.

SOME GOOD LEGAL ADVICE

Mr. George W. Whiteside, attorney N. Y. Medical Society, in New York Medical Journal, offers some good legal advice to physicians:

"Use X-ray in diagnosis of all fractures and dislocations both before and after the fracture or dislocation is reduced. The X-ray plate provides a permanent record of the condition and reduces the element of possible fraud upon the physician. In orthopedic work often ordinary photographs of conditions that would not be indicated by the X-ray are likewise of value.

"Where a physician is dismissed from a case, a letter to the patient, the physician retaining a carbon copy, fixing the time and circumstances, might prevent a future claim by the patient that the physician abandoned the case. This claim by patients has arisen in a number of cases, where the true facts clearly indicated that the physician was dismissed and another physician employed.

"In cases of children particularly, although clinical diagnosis may not indicate diptheria cultures from the nose and throat should early be taken. Suits have been based upon the claim that such cultures were not taken, where fortunately the physician was able to show from the records of the Department of Health the taking of such cultures.

"Where diphtheria is present in one child in a family, similar cultures may well be made of the other children and members of the family. This practice should at least be advised by the physician to the family, and while of doubtless benefit to the family as a precautionary measure, may eliminate and prevent the probability of claims against a physician.

"The early use of antitoxin in all diphtheria cases in doses suggested by the health authorities is recommended.

"Where intubation is necessary, insist that the patient be in charge of a nurse competent to act when conditions indicate the necessity of reintubation, so that intubationists may be summoned promptly. In the absence of such expert nurse advise hospital treatment.

"Advise either patient or family of the probable outcome of disease or operation where feasible. This may avoid claims against a physician where unsatisfactory results are inevitable in the nature of the case, but, through patient's ignorance or otherwise, claims against a physician are made.

"Time and frequency of visitation to sick patients in serious cases should be determined by the physician and not by the family. A doctor's desire to save a patient expense may be considerate for the patient's purse, but may be hazardous to the doctor if subsequent claim of neglect of the case is made.

"Keep records of every patient treated so that the transaction may be identified. Records made at the time of treatment may be invaluable to the physician in establishing the falsity of the claim made against him."

Resolution Disapproving the Public Health Activities of the Red Cross—"We approve the recommendation of the Board of Trustees relative to the Public Health activities of the American Red Cross, and their advice that the House of Delegates take appropriate action to convince those in authority that the public health activities of this organization are no longer necessary, and if continued are likely to promote community irresponsibility and helplessness in regard to its own welfare.

"Your committee further recommends that the Board of Trustees take such action as will make this recommendation effective at the earliest possible moment."—Abstract from Minutes of the Seventy-Third Annual Session of the A. M. A.

BOOKS RECEIVED

Transactions of the American Pediatric Society. Thirty-third session. Held at Swampscott, Mass., June, 1921. Edited by Joseph Brennemann, M. D.

Applied Chemistry. An elementary text book for secondary schools. By Fredus N. Peters, Ph. D., Instructor in Chemistry in Central High School, Kansas City, Mo., for twenty-three years; more recently vice-principal. Author of "Chemistry for Nurses," etc. Illustrated. St. Louis. C. V. Mosby Company, 1922. Price, $3.50.

Symptoms of Visceral Disease. A study of the vegetative nervous system in its relationship to clinical medicine. By Francis Marion Pottenger, A. M., M. D., LL. D., F. A. C. P., Medical Director Pottenger Sanitarium for Diseases of the Lungs and Throat, Monrovia, California. Author of "Clinical Tuberculosis," "Tuberculin in Diagnosis and Treatment," "Muscle Spasms and Degeneration," etc. Second edition. With 86 test illustrations and 10 color plates. St. Louis, C. V. Mosby Company, 1922. Price, $5.50.

The Healthy Baby. The Care and feeding of infants in sickness and health. By Roger H. Dennett, B. S., M. D., Professor of Diseases of Children and Director of the Department in the New York Post-Graduate Medical School; attending physician in the Babies' Ward of the New York Post-Graduate Hospital; Consulting Pediatrician to the Victory Memorial Hospital, Brooklyn, the Passaic General Hospital, the New York Episcopal Orphans' Home and Asylum, etc.; Fellow of the New York Academy of Medicine. Second edition, revised. New York, the MacMillan Company, 1922. All rights reserved.

BOOK REVIEWS

Diseases of the Eye. A handbook of ophthalmic practice for students and practitioners. By George E. de Schweinitz, M. D., LL. D. Ninth edition, reset, with 415 illustrations and seven colored plates. Philadelphia and London: W. B. Saunders Company, 1921.

Many new subjects, including new operative procedures, make their first appearance in this edition. This standard textbook reflects the present state of the knowledge and the literature of ophthalmology. F. C. C.

Diseases of the Skin and the Eruptive Fevers. By Jay F. Schamberg, M. D., Professor of Dermatology and Syphilis, Graduate School of Medicine, University of Pennsylvania. Fourth edition thoroughly revised. Octavo of 626 pages, 265 illustrations. Philadelphia and London: W. B. Saunders Company, 1921. Cloth, $5 net.

This book is well worth the room and its purchase price. The discussions on syphilis and the eruptive fevers particularly are diagnostic and among the best. The book contains many excellent prescripions.

In most of the ordinary skin diseases the descriptions are quite concise and well worth reading. The reviewer recommends the book. G. D.C.

Opportunities for Malpractice Suits—"A suit for malpractice may be based on acts of omission as well as commission, and a physician may be sued for failing to do something he should have done as well as for doing something he should not have done. Another definition says, "Malpractice is the treatment of a patient by a physician or surgeon in a manner contrary to accepted rules and with injurious results to the patient." Every courageous physician who advances further than the accepted rules permit may lay himself liable to a charge of malpractice.

It is definitely known that in a large majority of the malpractice suits the patient was unable to and did not pay for the services rendered by the physician. The reasons why charity patients are more prone to bring malpractice suits are, first, these patients are notoriously careless and indifferent about following the advice and instruction of the medical attendant; and second, they always need the money. They are just as careless about following instructions regarding a fracture as they are about their financial affairs and, therefore, they are more likely to get a bad result. Because they always need money they are usually willing to sue a physician, or anyone else for that matter, if there is even a faint chance to obtain money.

Young impecunious lawyers are frequently a cause of malpractice suits. The old-established lawyer of good reputation very seldom appears for the plaintiff in a malpractice suit against a physician. He has acquired a wholesome respect for the medical profession and his observation has taught him that it is very seldom that a medical practitioner is actually guilty of malpractice.

I have known of a few suits that were brought because of the jealousy and meanness of a rival practitioner of medicine. Of all asinine, stupid ways of getting revenge, the instigating of a malpractice suit is the meanest. If the suit is successful it will probably encourage others, and the star medical witness for the plaintiff is likely to be the defendant in the next case."—Illinois Medical Journal, June, 1922.

The Cost of Medical Insurance in England—Sir J. D. Rees, M. P., recently stated "that the expenditure in this connection had risen from twenty-five millions sterling in 1890-91 to three hundred and thirty-two millions in 1920-21 and would probably be not less than four hundred millions for 1921-22. He developed the fact that thirty million persons, exclusive of unemployed, out of a population of forty-eight millions, had been in receipt of public assistance in 1919-20. . . . . Mr. Macquisten pictured the application of the principle of the National Insurance Act to the legal profession and said that he imagined that if the public were required to 'hand over so much a week to the barrister for the purpose of getting advice, the legal advice obtained in such circumstances would be the same kind of advice as the medical advice given by the panel doctor.' This member evidently does not think very highly of the panel doctor nor of the act, which he said provided doctors who could not get practices in the ordinary competition in the medical profession and is carried on by inflicting penalties upon very poor people who can get no benefit from it. . . . An inquiry in Parliament, by Sir J. D. Rees, brought out the fact that the total charge upon the Government for health insurance in 1920-21 was approximately nine and one-half pounds and for 1921-22 estimated at nine million pounds. The contributions of employers and employed in 1920-21 were approximately twenty-one million four hundred thousand pounds, and estimated for 1921-22 at two hundred thousand pounds more than in the preceding year."

REFLECTIONS ON MEDICAL ETHICS

"Since nation-wide publicity, reaching to every obscure crossroads newspaper in the land, has been given to a speech delivered a few days ago by that otherwise useful man, Royal S. Copeland, reflecting on Medical Ethics, it is time for the profession to take notice. . . . When a man like Copeland gives voice to such statements as 'the Code of Medical Ethics is the most antiquated, moss covered germ ladened institution in the world' . . . . by his own language convicts himself of what it is charity to ascribe to simple ignorance on the part of its author. . . .

"No! the most emphatic tenets of medical ethics have always been to gladly and freely hand to humanity whatever has been discovered for the alleviation or cure of diseases and to condemn, as despicable quacks, all 'who make a secret of cures.' . . .

"Heritages from the wise, as well as the written evidences of lofty ideals from our profession, who during the ages have held aloft the Caducieus of Hermes, are sometimes overlooked in the cares and drudgery of professional life. Some, therefore, are to be found with heads more or less burdened with scientific acumen who show unpardonable ignorance of their duty to the community and to the profession to which they belong. Such one-sided tendencies can but be deplored. . . .

"The lamented Dr. Osler said in reference to the public: 'There is a delightful Arabian proverb, two lines of which run: "He that knows not and knows not that he knows not is a fool—shun him. He that knows not and knows that he knows not is simple—teach him." It is our province to have to deal with the extremes of civic life. We must fight the wilful ignorance of the other. Not with the sword of righteous indignation, but with the skilful weapon of the tongue. On this ignorance the charlatan and the quack live.' . . . It is unprofessional and ignoble to fail to defend the reputation of an absent brother when justice demands it—well has it been observed: 'He who degrades a colleague degrades his art.'

"In changing from one physician to another it is common for patients to attempt to justify their course by speaking ill of the former physician. No physician should permit such criticism.

"The porcupine attitude towards other physicans and petty quibbling only furnish material for jocose remarks from the public and add nothing to a vocation which holds a sacred trust. . . . Disparaging allusion to the ignorance of the past does not commend one, for the world knows centuries were required to produce one Hypocrates, a Jenner, a Pasteur and a Sims, not to mention a few great now living, and that the vaunted perfections of today will be viewed by the medicine of the future much as we contemplate prehistorc man's stone ax. . . . From the physician the public has a right to exact efficiency in diagnosis, treatment, and prophylaxis. To meet these requirements every available aid must be invoked to properly interpret the intricate symptoms at times encountered, not forgetting that abstract science is nothing unless it be the handmaiden to an analytical mind, common sense and sound judgment. . . . The crucial test for all conduct—the one law, which, regardless of creed or religion, all philosophers and prophets acknowledge as paramount in determining and governing human relationships from a social or economical viewpoint—is the Golden Rule. Make it the standard of measurement for every act; the court of last resort—the final tribunal for every doubtful position, and error will not occur."—Furman, Southern Medicine and Surgery, June, 1922.

GENIUS AT BAY

"If genius is a neurosis, as has been plausibly argued, then some interesting questions may be postulated in the light of new knowledge in the psychologic sphere.

"Hitherto, the genius either did not know that there was anything the matter with him, or if he suspected that there was he had no idea as to its nature. Other people said that his gifts were from God—or from the devil. But nowadays we account for him with equal glibness, in another way; we say that he is a neurotic, and we furnish him with a set of Freudian complexes that would put an Œdipus to shame.

"Now we don't believe that geniuses of an older day tried to understand themselves; they just pegged away at their marvelous creations and made the most of life without inquiring too closely into the reasons why of their unconventional activities; and it wouldn't have done them any good if they had, for men had not then gone beyond God and the devil in their thinking; Freud was born late, and our ancient geniuses were deprived, as it were, of his services.

"The point to which we are leading up is this: The genius of today can hardly escape 'contamination' by the Freudian lore which drips from everybody's tongue and pen. Will it not prove to be a tanglefoot influence? When your genius becomes self-conscious and censorious about his mechanisms will he not cease to be an honest-to-goodness genius? How can a potential Shelley, wrastlin' with something on the Skylark order, forget his complexes long enough to turn out an ode of immortal quality? Let us suppose that he starts in with an inspired line or two comparable to those with which Keats begins the Grecian Urn; at that point Keats was no longer a man, but a veritable god; at that same point our present-day genius will realize that it is only some darned homosexual complex that is attempting to order his fancies and he will not be able to capitulate to it quite completely enough to give us another another Grecian Urn?

"That is the point. How can there ever be another Grecian Urn?

"This Freudian stuff defeats that which it attempts to elucidate. It is a Frankenstein. It hampers the divine fermentation that begets great art.

"Suppose that Leonardo da Vinci had understood that his mother-love complex was at the bottom of all his extraordinary mechanisms, and suppose that he had realized all the morbidness and abnormality of his obsession—is it likely that he would have yielded to it so completely as to achieve all that we know as the product of his brain and hand? Do not such things depend, after all, upon one's sublime unconsciousness of the workings of creative mechanisms?

"Truly our civilization seems to carry within itself all the germs making for its own destruction.

"Today we understand the reasons for everything—which may be why we are at such a standstill in the world of art.

"It would require a genius to show us the way out of such a dilemma. How can the reductio ad absurdum be escaped?"—(New York Medical Journal, July, 1922.)

Sheppard-Towner Act Rejected—The Legislatures of Massachusetts and New York and Rhode Island have recently rejected Federal aid as offered through the provisions of the Sheppard-Towner act. New York has appropriated $130,000 for "protection of the health of mothers, infants and children" to be expended by their own Board of Health.

NEW MEMBERS

H. B. Farnsworth, Oakland; Wm. G. Morton, Needles; F. Wm. Gardner, Loma Linda; E. W. Weirich, Angels Camp; James D. Coyle, Sacramento; H. A. Clattenburg, Folsom; David Cohn, San Francisco, Hiram B. Duncan, San Francisco; Llewellyn L. Jones, San Francisco; Delta R. Olsen, San Francisco; Clifton A. Thomas, San Francisco; Percy A. Millar, San Francisco; Jos. A. Sampson, San Francisco; John D. Humber, San Francisco; Thos. H. Kelly, San Francisco; N. T. McArthur, Imola; H. R. Coleman, Napa; Francis E. Morgan, Santa Cruz; Dexter N. Richards, Berkeley; Edgar D. Smith, Los Olivos; Amy C. Stevens, San Francisco; Robin L. Richards, San Francisco; John E. Wilson, Los Angeles; R. Umeswa, Los Angeles; Homer S. Wilson, Lankershim; James Johnston, Los Angeles; Florence Keller, Los Angeles; C. F. Harding, Ocean Park; A. V. Stephenson, Long Beach; Frank H. Chase, Los Angeles; Albert Q. Spaulding, Santa Barbara; Jesse C. Edwards, Oakland; Walter W. Peterson, Weaverville; Melvin J. Rowe, Talmage; John N. Blood, Exeter; Keith S. McKee, Bakersfield; Wm. H. Moore, Bakersfield; Wm. O. Moore, Napa; Edward W. Beach, Sacramento; Leo P. Bell, Sacramento; Morris H. Silverberg, San Francisco; Geo. E. Sutton, San Francisco; W. H. Bucher, San Fernando; Raymond C. Thompson, Whittier; Steele F. Stewart, Los Angeles; D. E. Goodwin, Long Beach; Clarence S. Cook, Los Angeles; James McC. Stoddard, Beverly Hills; Herman E. Schorr, Los Angeles; Lawrence Downs, Los Angeles; Carl T. Rose, Los Angeles; R. L. Thompson, Burbank; Louis D. Cheney, Los Angeles; John F. McKittrick, Los Angeles; W. H. C. Hatteroth, Oakland; A. A. McClurkin, Fortuna; John D. Lawson, Woodland; Thos. M. Cunningham, La Mesa; H. W. Pasley, Del Rey; Albert F. Goldberg, Fresno; W. G. Milholland, Fresno; Alson R. Shufelt, San Jose; J. W. Green, Vallejo; Hugh E. Smith, Newman; Smith A. Quimby, Madera; T. Victor Hammond, San Francisco; Carol O. E. Werner, San Francisco; Edw. F. Stadtherr, San Francisco; D. M. Ervin, San Francisco; Paul Weinholz, San Francisco; Frank Y. Kitsuda, San Francisco; F. Vowinckel, Alameda; Henry G. Zanger, San Francisco; Merton J. Price, San Francisco; Theo. Kryshtovich, Los Angeles; Arthur L. Gagnon, San Diego; W. F. Pritchard, Imola; Herbert R. Stolz, Sacramento; Wm. E. Costolow, Los Angeles; Herbert C. Jones, Pasadena; Charles Stein, Bellflower; M. M. T. de Gerin, Los Angeles; Donald McGibbon, Los Angeles; W. H. Buskirk, Los Angeles; O. B. Sheets, Los Angeles; John C. Rogers, Long Beach; James F. Percy, San Diego; A. S. Abdum-Nur, Los Angeles; Wm. Cole, Anaheim; Augustus H. Galvin, Anaheim; John B. Legnard, San Diego; Lillian B. Mahan, San Diego; S. K. Jamgotchian, Fresno; Florrila M. White, Palm Springs; Rodney A. Yoell, San Francisco; J. S. Reekie, Chino.

Resigned—W. T. Barry, Santa Barbara Co.

Transferred—W. E. Carter, from San Francisco Co. to Los Angeles Co.; L. L. Jones, from San Francisco Co. to Tulare Co.; W. Lester Wilson, from Stanislaus Co. to Santa Clara Co.

Legal Defense Indemnity in Malpractice Suits—"Dr. McDavitt, special committee chairman, Board of Trustees of the A. M. A., presented a report which embodied the study made by the committee of legal defense indemnity in malpractice suits. Emphasis was made of the need of co-operation between the administrative directors at headquarters of the Association and the committees on medical defense of the constituent State associations. Attention was called to the action of the Council on Health and Public Instruction in its report to the House of Delegates recommending the separation of all legislative functions from the jurisdiction of the Council. Inasmuch as the House of Delegates approved of this request of the Council on Health and Public Instruction and recommended the organization and establishment at headquarters of a Bureau on Legal Medicine and Legislation with a full-time secretary in charge, the Board empowered the Executive Committee and the General Manager to proceed at once with this undertaking."—Jour. A. M. A., June 10, 1922, p. 1821.

OBITUARY

THOMAS J. COX

Thomas J. Cox of Sacramento, one of the best known and best beloved physicians of this state, died suddenly at his home in Sacramento on July 5. Doctor Cox was born on the old-time Cox ranch on the American River fifty years ago. He was educated in the public schools of California and received his medical degree from Cooper Medical College of San Francisco. In commenting upon Doctor Cox's untimely death, the Sacramento Bee says:

"Deceased was a man of great public spirit, kindly disposition and generous heart. He was ever to the front in everything that made for public good, and for public weal, and for public advancement. His purse was never closed to the appeal of suffering or of want."

Doctor Cox leaves a wife and five children—three daughters and two sons; also a sister, Mrs. James Beach of Fair Oaks.

DEATHS

Jamison, William R. Died in Watsonville, Calif., June 29, 1922, aged 65 years. Dr. Jamison was a graduate of the California Medical College, 1895, and was a member of the California State Medical Society.

Herrick, Albert B., Sr. Died in Santa Rosa, Calif., June 27, 1922, aged 71. Graduate of Medical Department, University of Michigan, June, 1879. Deceased was the father of Albert B. Herrick, Jr., also a physician of Santa Rosa.

Diggins, Edward A. Died at Weimar Hospital, June 29, 1922. Graduate of Cooper Medical College in 1895. Dr. Diggins was a veteran of the Spanish-American and World wars.

Meigs, J. J. Died in San Francisco, July 8, 1922, aged 84. He received his degree of doctor of medicine from Harvard Medical School in 1860. Dr. Meigs was prominent in Grand Army circles, having been present at Appomattox when Lee surrendered to Grant.

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ORIGINAL ARTICLES

RESPONSIBILITY FOR STATEMENTS AND CONCLUSIONS IN ORIGINAL ARTICLES

The author of an article appearing in the JOURNAL *is entirely responsible for all statements and conclusions. These may or may not be in harmony with the views of the editorial staff. Furthermore, authors are largely responsible for the language and method of presenting their subjects. All manuscripts will be carefully read, but editorial privileges will be exercised only to a very limited extent. It is believed that the manner of presentation of any subject by any author determines to no small degree the value of his conclusions. Therefore, both the author and the reader, in our opinion, are entitled to have the subject as presented by the author as little disturbed as possible by the editors. However, the right to reduce or reject any article is always reserved.*

RECENT DEVELOPMENTS IN RADIOTHERAPY.*

By REX DUNCAN, M. D., Los Angeles, Cal.
(From the Radium and Oncologic Institute.)

Radiotherapy, or the treatment of diseases by means of radiation, is based upon the fact that certain histological and bio-chemical changes are produced in the body tissues by rays capable of penetrating the tissues. This effect varies with the character, quality and quantity of radiation applied, and may be stimulating or destructive. All tissues are affected, but there is a hypersusceptibility of neoplastic or newly formed tissues. Generally speaking, the resistance is greater the more nearly the newly formed tissues histologically resemble normal, and a proportionately greater susceptibility in the more rapid growing and less perfectly formed types. However, a wide variation in susceptibility of tissues has been noted by all careful observers, and was further demonstrated by careful research conducted by Wood, demonstrating quite conclusively that it is impossible to establish a so-called lethal dose for cancer.

The histological changes that occur have been carefully studied by ourselves and numerous observers. We have, for some time, been grading our tumors according to the grouping suggested by A. C. Broders, and noting their susceptibility. This work, which will be published in detail later, gives a more comprehensive understanding of the biological effect of irradiation and suggests certain improvements in technique and the possibility of a more definite prognosis. The precise cause of these histological changes due to irradiation has not been determined. Whether or not it is due to the direct effect of the radiation on the neoplastic elements or secondary to the changes produced in the normal tissues, or a systemic effect or a combination of these and other changes, is a matter for further research. That destructive changes do occur in certain types of neoplasms consistent with the dosage and technique employed, is a well-established fact.

The rapid development and excellent results obtained with radium therapy have been due largely to the fact that with radium we possess a constant and definite source of energy and a very thorough understanding of its physical properties. The mechanical and physical problems of X-ray equipment have recently been developed to the point where we now have equipment, both machines and tubes, capable of operating under high voltage, and means of accurately measuring at all times the voltage employed. The character and quality of X-rays produced are dependent upon the voltage passing through the X-ray tube. The greater the voltage employed, the larger quantity of short-wave length or more highly penetrating rays produced, the intensity increasing as the square of the voltage.

Modern deep X-ray therapy has been made possible by the physicist and electrical engineer, who, through scientific research, have given us, first, Roentgen ray tubes, which will stand very high voltage continuously, and, second, the development of electrical apparatus which would generate safely high voltages with great reliability and safety from breakdown, and, third, physical measurements which enable us with certain technique to know quite accurately the character and quantity of radiation, and the percentage and distribution of intensity at various depths within the body.

The several factors governing the quantity and quality of the therapuetic application of X-rays are the type of equipment employed, the voltage, milamperage, screen or filter, skin distance, port of entry and time. Varying these factors, Dessauer, by elaborate physical researches, compiled

* Read before the New Mexico Medical Society, April 28, 1922, at Gallup, New Mexico; also before the California State Medical Society, at Yosemite, May 15, 1922.

certain tables, showing the distribution of intensity or intensity curves at various depths within the body.

Table 1 is based upon research of Dessauer and Coolidge, and is applicable to our equipment and technique, and shows, with various voltages, the percentage of intensity absorbed superficially or within the first cm. of tissue and that reaching 10 cm. in depth after filtering through from 0.5 mm. to 1.33 mm. of copper, employing a 25 cm. port and 50 cm. skin distance.

The biological or therapeutic value of deep X-ray therapy is dependent upon our ability to produce a sufficient and homogenous radiation of deep tissues, without destruction of the skin and intervening areas, and without too great toxaemia or systemic effect. The amount of systemic radiation is proportionately diminished with higher voltage, heavy screening and a lesser number of ports employed.

Figures 2 and 3 represent Dessauer charts, showing the curves and percentage of intensity at various tissue depths, employing 150,000 volts and 200,000 volts, and other factors as shown. The distribution of intensity with various voltages up to 300,000 volts under conditions practical for their therapeutic application, have been worked out principally by Dessauer, Coolidge and Wilson. With the necessary apparatus and the proper application of these physical facts, it is possible to evolve a technique by means of which the desired amount of radiation may be placed at practically any point within the body.

In our work we have found it most satisfactory to measure or calibrate the patient and draw on a piece of glass, film or transparent paper, a cross-section of the patient, outlining accurately as previously determined by examination, the areas of involvement and probable metastasis or extension of the disease. It is then possible to work out a technique of treatment that will enable us to apply the desired percentage of intensity to each area, and properly record same. While this requires considerable work in each case, it permits of a very accurate and scientific radiation, and prevents routine methods with their pernicious faults. The exact dosage and technique must be based upon the general physical condition of the patient, character and location of the involvement, and the histopathology of the neoplasm.

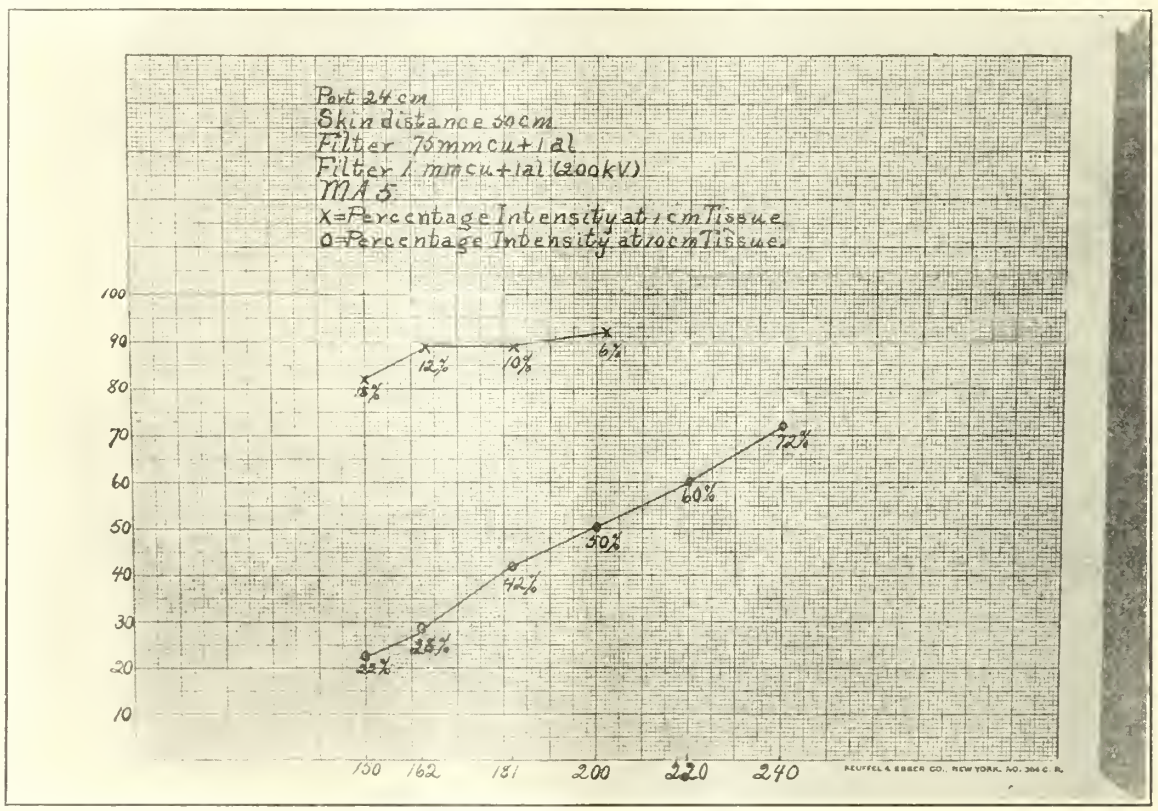

Figure 1

Clinical and experimental observations of the effect of deep X-ray upon the constituents of the blood show diminution in red cells, with corresponding reduction in hemoglobin. For several hours following irradiation there is a neutrophilic leukocytosis, followed by a leukopenia, with particularly striking diminution in the number of lymphocytes. Cases with a marked anemia should not be subjected to vigorous X-ray treatment until the blood picture has been improved.

The biological dosage of X-ray is dependent upon many factors previously referred to, and will require extensive observation and research.

The actual technique as employed in the European clinics varies greatly. There is, however, an unanimity of opinion on two essentials for intensive X-ray therapy; apparatus which can deliver at least 200,000 volts and the employment of

heavy filters. Fortunately, our American-made apparatus is capable of working satisfactorily at 200,000 volts and over, with means of accurately determining the voltage employed. Our technique is improved by the use of higher voltage and amperage and a consequent shortening of the time of treatment required to give the same amount of deep radiation. While there are various details that modify the actual technique of treatment, the desired amount of radiation may be applied at practically any point in the average patient through two ports of entry with a total of two to four hours' time. The total dosage is given, as a rule, in one or two treatments, though this will vary

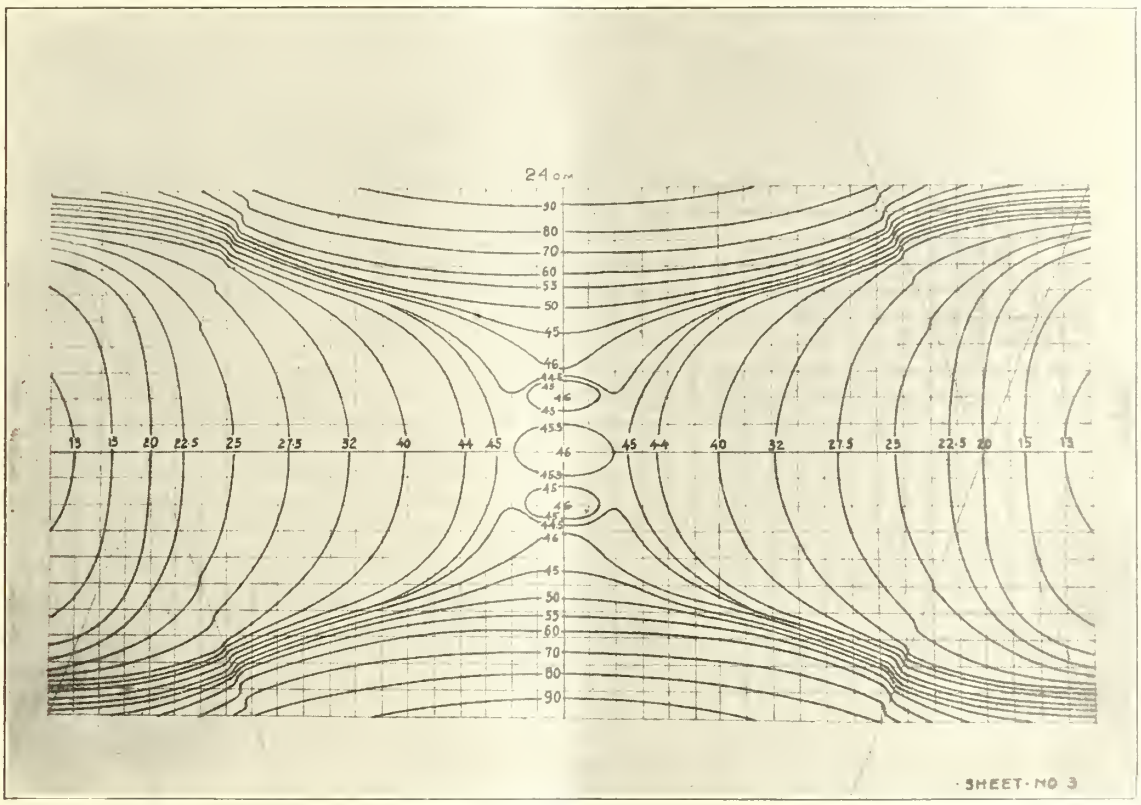

Figure 2—Chart showing distribution of intensity employing 150 k. v. plus .75 cu. plus 1 mm. al. at 50 cm. distance. 24 cm. port.

with the constitutional condition of the patient. We have observed a marked decrease in the percentage of cases showing nausea and other symptoms of constitutional disturbances since employing 200,000 volts and 5 to 8 milamperes than resulted with the previous technique.

Inasmuch as the cancer cells apparently develop a resistance to small repeated doses of X-ray or radium, it is essential that the lethal or cancer doses be administered in the shortest possible time.

Harot and Truchot report a high percentage of apparent cures of carcinoma and sarcoma treated with massive doses, and failures in patients where repeated small doses were employed. This later method is to be condemned and should be replaced by a systematic use of high doses of penetrating rays. Similar results regarding the relative effect of small repeated doses and intense radiation are reported by J. & S. Ratera, and others.

Deep X-ray therapy has been employed in European clinics largely for the treatment of deep-seated malignancies and the results reported have been consistently encouraging. Stern, in an article entitled, "Extensive X-ray Therapy as Seen Practiced in the Clinics of Europe," after reviewing somewhat in detail the technique employed in various clinics, states: "As to the choice of cases in most of the clinics I visited, I found that they had practically discontinued operating on all cases of carcinoma of the breast and the uterus. They claim that the results with irradiation alone are far superior and that they get approximately 85 per cent of cures, including all classes of cases taken at random. They were all very emphatic on the importance of never treating any type of sarcoma surgically, as the chances of metastasis are much increased by any surgical interference."

X-ray therapy with high voltage has been extended to new groups of non-malignant conditions. Hjalmas Eiken reports prompt healing in the treatment of deep purulent wounds, and favorable results in the treatment of surgical tuberculosis and carefully selected pulmonary causes are also reported by F. Jessen, Mr. M. Bechters and others.

James T. Case, whose work with high voltage equipment antedates by nearly a year that of all other workers in this country, states that high penetrating X-rays have advantage over radium for deep application, although radium will be

more in demand for use in tumors and in cavities of the body. He states that the immediate results in certain cases have been startlingly encouraging.

While our work is too recent to justify conclusions, the changes occurring and the results obtained in the treatment of a large number of benign and malignant conditions are very encouraging, and in certain cases, the immediate results have been most striking.

Relief of pain in several advanced pelvic cases has been most marked. One case of pelvic carcinoma that had been taking five grains of morphine per day, stopped voluntarily in 48 hours after the treatment was completed. Several cases of advanced inoperable carcinoma of the breast have shown marked absorption in the tumor mass and the regional lymphatics, with a consequent decrease in the swelling of the arm, and relief of pain. One case of extensive rectal carcinoma treated with combined radium and deep X-ray has shown a total absorption of the tumor mass in less than one month following treatment. Another case of large palpable tumor found inoperable at exploratory laparatomy has shown a marked reduction in size of the tumor and the patient has regained appetite, strength and weight. There are numerous other cases that have shown quite a marked immediate effect. I do not wish to be misunderstood, and fully appreciate that these cases may ultimately die a cancer death, but the palliation well justifies treatment and offers a faint possibility of cure in a small percentage at least. We feel that deep X-ray should always be used in the pre and post-operative treatment of cancer, and we are now employing deep X-ray therapy as routine in combination with radium emanation in all cases of uterine cancer and for the treatment of regional lymphatics, following the local use of radium emanation in intra-oral malignancies; also in all inoperable breast cancers and intra-abdominal malignancies, as well as in hyperthryrodism, and other appropriate conditions.

Radiotherapy, particularly by means of radium emanation, will continue to occupy a large and superior place in the treatment of a certain group of benign and malignant conditions. However, the large volume of high penetrating X-rays produced with high voltage has a broad application and greatly increases the scope of radiotherapy.

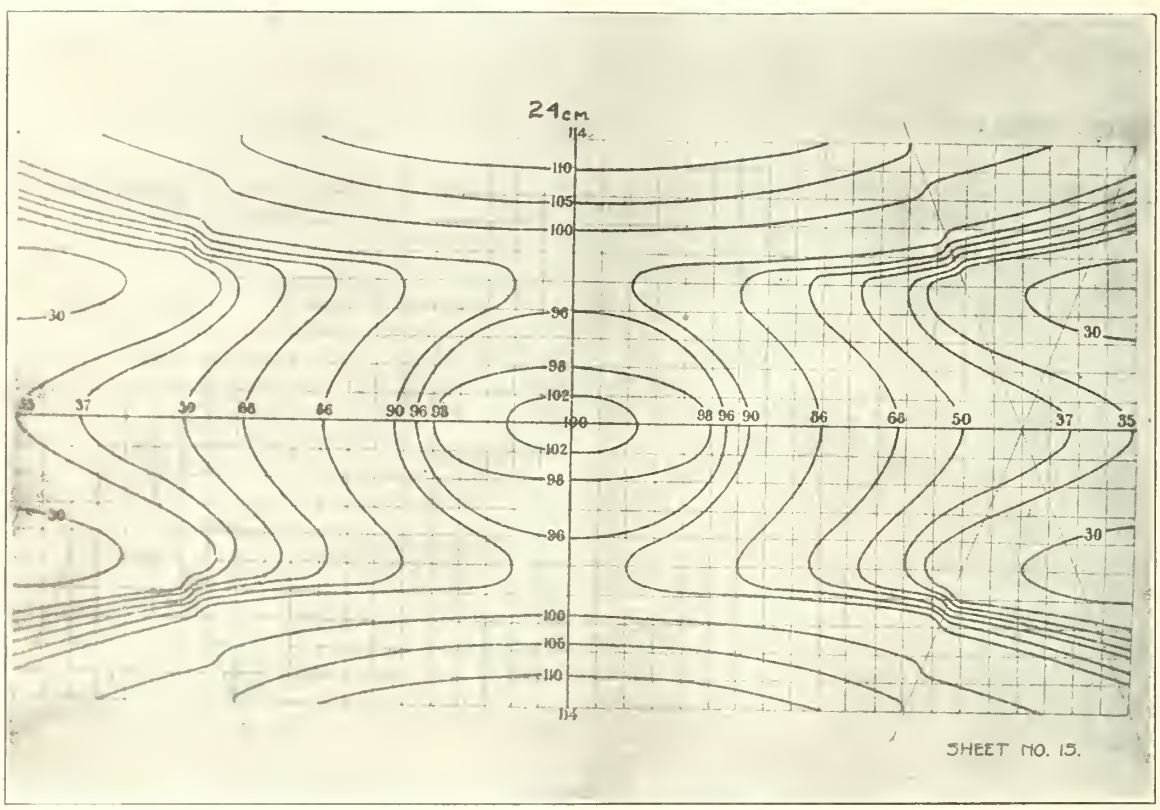

Figure 3—Chart showing distribution of Intensity employing 200 k. v. filter 1 mm. cu. plus 1 mm. al. at 50 cm. distance. 24 cm. port.

With adequate facilities for both radium emanation therapy and high voltage X-ray therapy available, it is possible to offer palliation in practically all cases of malignancy, and the percentage of ultimate cures will undoubtedly be increased. The new high voltage or deep X-ray therapy technique is upon a distinctly scientific basis, and must supersede all previous methods of X-ray therapy.

The full value of radium and X-ray therapy will not be obtained until the radiologist is consulted by the internist and the surgeon before operation, and as a consultant, given an opportunity to earlier co-operation in the selection and treatment of that large group of cases in which radiotherapy offers superior results.

GASTRO-INTESTINAL COMPLICATIONS ACCOMPANYING PULMONARY TUBERCULOSIS*

By WILLIAM C. VOORSANGER, M. D., San Francisco
(From the Oaks Sanitarium, Los Gatos, Calif.)

Good food constitutes one of the main therapeutic measures in the treatment of pulmonary tuberculosis. This does not mean, as was at one time erroneously assumed, that a tuberculous patient should be overfed and crowded beyond his capacity with large quantities of milk, eggs and cereals in addition to his regular meals. It does mean that he should have a properly regulated diet, including milk and eggs, sufficient to bring his weight to normal and restore his bodily strength and energy. However, adequate feeding of a tuberculous patient is often a practical impossibility, due to the numerous gastric and intestinal conditions, organic and particularly functional, which result as a direct concomitant of his pulmonary disease.

These problems will be analyzed as:

Functional—Loss of appetite; disgust for certain kinds of foods or for all foods; vagaries of diet; distress after eating, i. e., gas; nausea and vomiting (intestinal toxemia); coughing during eating; abdominal pain (gastralgia—diaphragmatic pleurisy); result of over-eating; diarrhoea.

Treatment—Particularly the combating of anorexia and the control of increased peristalsis by the use of intravenous injections of 5 per cent calcium chloride.

Organic—Gastric or duodenal ulcer; colitis; appendicitis; intestinal tuberculosis (differential diagnosis).

In pulmonary tuberculosis, symptoms referable to the stomach or intestine are exceedingly common. Mohler and Funk in 1000 consecutive cases found 64.6 per cent had gastric symptoms; Hutchinson in 72 per cent; Janowski 35 per cent, and Landis 55.3 per cent. These percentages are mainly for functional disturbances because actual tuberculosis of the stomach is almost unknown, occurring only twice in 2000 autopsies performed at the Brompton Hospital, London. Pulmonary tuberculosis causes a definite downward progression in gastric motility and secretory function. Hyperacidity is rare. The gastric mucosa and glands may be impaired, thus causing gastric disorders. Undoubtedly, in pulmonary tuberculosis we have delayed digestion which may produce symptoms as the primary disease progresses. Pulmonary disease often has a gastric onset, and every patient complaining of prolonged anorexia or gastric distress should have a complete physical and roentgenological examination to ascertain if pulmonary tuberculosis is present.

Tuberculosis is unquestionably a disease dependent upon lowered resistance. To arrest it, resistance must be elevated, and unless the patient will eat this is unobtainable and our best methods of treatment futile. Child nutrition is being approached from the point of view of the child being an entity because his digestion differs from the adult. We may go further and assert that adult digestions differ one from the other and that each under-nourished adult is a separate entity. In feeding a tuberculous patient, particularly one who complains of loss of appetite, his particular psychology must be considered. What were his habits before he became ill? What are his idiosyncrasies and prejudices? We base all diets on the proper relation of carbohydrates to proteins, but must not this rate differ in different individuals according to occupation and temperament? Again, how great a role the nervous system must play in its relation to digestion! Prolonged indigestion causes loss of weight and strength and diminished resistance. A proper or effective blood circulation must play an important role also in digestion and the patient's desire for food. Nutrition from the cellular point of view is intimately bound up with the idea of a normal or abnormal increase or decrease in the digestive power of the individual cell. As the end products of gastric and intestinal digestion are transmitted to the cells of the body by the plasma it is manifest that metabolism is influenced by good or defective circulation. We are wont to accept "loss of appetite" in a tuberculous patient as a natural symptom of his disease produced by a general toxemia and treat it with tonics with forced feeding, the latter often causing vomiting or nausea. Loss of appetite is often due to toxemia, but is just as often due to temperamental peculiarities, nervous symptoms or defective circulation.

A worrysome functional disturbance often more difficult to combat than anorexia, is a "disgust for certain kinds or for all foods." Patients who formerly had been hearty eaters often complain that they can no longer eat meat because the odor of it kills their appetites. Others state that although they feel like eating, they know that if they took food they would vomit, although the food did not distress them.

Such patients continue to lose weight until they are taught to overcome these peculiarities. Vagaries of diet are met with only too often in handling tuberculous patients. Common examples are those who cannot drink milk nor eat soft-boiled eggs; who will discard a whole tray because sauce was poured over the meat; who will not eat chicken; or who can only eat one kind of cereal. In fact, instances of freakishness in eating common in the healthy individual can be multiplied manyfold in the chronically sick. Nor is the condition easy to combat, since in tuberculosis our aim is hypernutrition. The very articles of food most necessary for the latter are refused in a foolish and stubborn belief that the patient cannot tolerate them. Patients who receive narcotics often take violent dislikes to the most easily digested foods.

Nausea and vomiting are the most frequent gastric or intestinal symptoms. They may be due to high temperature or to intestinal toxemia, but more often to excessive coughing, swallowing of sputum, or the clinging of tenacious sputum to the pharynx, which causes gagging and vomiting.

* Read before the Fifty-first Annual Meeting of the Medical Society of the State of California, Yosemite Valley, May 18, 1922.

Swallowing of sputum plays an important role in the continuation and aggravation of disordered gastric function. It may best be combated by instructing the patient never to swallow his sputum. The drinking of a glass of hot water fifteen minutes before eating, particularly before breakfast, proves often most efficacious in loosening bits of tenacious sputum and counteracting the coughing and subsequent vomiting which often occurs after the first few mouthfuls of food. Pottenger explains nausea and vomiting as an expression of increased muscular tonus in the gastric walls through visceral reflexes. However we explain nausea and vomiting, it is an ever-present complication and often prevents the patient's upbuilding. Closely allied to nausea and vomiting is coughing during eating, which often induces the former. Many patients cough upon the slightest pharyngeal irritation—and the swallowing of food seems to particularly excite a pharyngeal reflex. Sometimes this coughing will not occur until the meal is completed, but whenever it occurs often expectoration and vomiting follow. If the vomiting occurs with every meal, nourishment of the patient naturally becomes a great problem. A small dose of Heroin or Codein fifteen minutes before meal time may be beneficial. Patients often develop a "habit" cough and exercise this particularly while eating. This cough can be controlled by teaching the patient to inspire when he feels the pharyngeal "tickle."

Abdominal pain is one of the most distressing symptoms seen in the course of pulmonary tuberculosis. Its causes are numerous. Certain articles of food may cause it, particularly milk. Acute epigastric pain suggestive of gastric ulcer may cease immediately after the removal of milk from the patient's dietary. A few days later the milk may be resumed without the patient feeling any distress. Eggs often have similar effect. Overeating is one of the frequent causes of epigastric pain. Excessive amounts of raw fruit also may cause violent abdominal pain. Increased peristalsis is a natural result of dietetic indiscretion—hence the necessity of making each patient a dietetic study and not feeding everyone alike or according to a fixed system. One patient may assimilate 3,500 calories daily—another may thrive and gain weight on 2,500. The greatest problem with which we have to deal is the patient himself. He believes the success of treatment depends upon cramming himself with food, particularly excessive amounts of milk and eggs, and if pain results he does not attribute it to overeating or wrong food, but to intestinal tuberculosis. It is often most difficult to convince him to the contrary.

Diaphragmatic pleurisy may cause abdominal pain, but treatment of pleurisy by aspirin and strapping will give relief. Pain in the region of the gall-bladder may suggest disease of this organ. Whereas the vast majority of all abdominal pain in the gastric or intestinal region is produced by temperamental idiosyncrasies or dietetic indiscretions, we must not forget that we may have organic causes such as gastric ulcer, appendicitis or intestinal tuberculosis. Appendicitis of tuberculous origin or otherwise is a condition which must always be kept in mind in acute abdominal pain.

Diarrhea, so frequently coincident with pain in the abdomen, is sometimes of organic origin, but more often it is due to dietary indiscretion. No combination of symptoms will so upset the patient's equilibrium and cause discouragement as diarrhea and pain. He has, of course, heard or read that these are cardinal symptoms of intestinal tuberculosis, and it often may take all one's tact to persuade him otherwise. To accomplish prompt relief of the condition is, of course, the best argument. When milk is the cause it should be stopped for one or more days. If it is due to intestinal toxemia, irritation of the gastric or intestinal mucosa or even a slight tuberculous ulceration, a 5 per cent solution of calcium chloride intravenously is useful. An initial dose of two cc. seems best. After four to five days, if no result is apparent, a dose of five cc. may be given and repeated weekly if required. Sometimes the immediate effect of the treatment is brilliant, the pain and diarrhea ceasing in twenty-four hours. This applies principally to cases of functional disturbances with little or no organic involvement. In one patient with marked intestinal tuberculosis accompanied by severe pain and diarrhea the symptoms disappeared within twenty-four hours after the injection. He eventually died, but for months previously he received considerable comfort from injections from one to three weeks apart. Calcium chloride very probably operates through inhibition of peristalsis, and of course its action is purely palliative. The author of the treatment maintains that relief is always obtained in the absence of excessive intestinal ulceration. Its value is great principally in cases of stubborn pain and diarrhea when definite cessation of these symptoms will convince the patient that his condition is not hopeless.

There is no more important problem than the determination of the status of a tuberculous patient with abdominal symptoms. Edward Archibald makes a plea for early recognition and surgical treatment of true tuberculous involvement of the intestine. He states "when a patient complains of pain in the mid or lower abdomen at irregular intervals during the day, but chiefly in the late forenoon or afternoon, these pains being crampy of stabbing, aggravated by food and relieved by fasting, felt only during a part of the day, then one must be very suspicious of tuberculosis. When he has loss of appetite—real distaste for food; when he has nausea at times; when he gives up one article of food after another; when he develops a slight fever which is not attributed to his lung condition, and if this persists over three or four weeks—then one may be almost sure of the diagnosis." Archibald is correct in urging an early diagnosis of true intestinal tuberculosis, because surgery offers a result in a percentage of these cases and temporary relief in the majority. I have seen the symptom complex detailed above as being pathognomic of intestinal tuberculosis disappear permanently under rest and

proper diet. In this event it was no doubt caused by functional disturbances or faulty diet.

In determining our diagnosis we should never forget that the tuberculous patient may develop the same abdominal conditions as the non-tuberculous patient, i. e., gastric or duodenal ulcer, gall-bladder disease, colitis or acute appendicitis. The differential diagnosis of these conditions from tuberculosis is not always easy—particularly as one hesitates to submit a patient with pulmonary involvement to an operation. We are often confronted with the problem of whether we are dealing with a diaphragmatic pleurisy or gall-bladder disease; whether an epigastric pain persisting is due to gas or an ulcer; whether a colitis is toxic, infectious or tuberculous; whether pain in the right lower abdominal quadrant is due to appendicitis or not. In the last named, blood examination will often clear the diagnosis except in the sub-acute forms. It is necessary to keep all these conditions in mind, when a patient with pulmonary tuberculosis develops abdominal symptoms, particularly since the latter may be independent of his tuberculous condition, which even more complicates the picture.

Fluoroscopy may be of some assistance in making a diagnosis in intestinal tuberculosis. Pirie, who did the roentgenological work for Archibald, states: "In a tuberculous subject with symptoms suggesting tuberculous caecum, if the caecum did not fill from four to twelve hours after the barium meal, when examined at intervals of about half an hour, then the want of filling confirms the diagnosis." In the few cases which I have fluoroscoped I have never been able to obtain positive evidence.

The decision as to whether the abdominal symptom complex is functional, due to diet, or whether it is organic, is important, because if the last named surgery becomes necessary. This paper cannot go into the surgery of intestinal tuberculosis. The results are occasionally permanent in the early mild ulcerative type of colitis, but in most cases they are palliative. It is my belief that the patient with pulmonary involvement should be given every possible chance with conservative methods before submitting him to a radical surgical procedure. Above all things, his pulmonary lesions must not be too far advanced if he is to submit to an operation for intestinal tuberculosis.

CONCLUSIONS

This brief paper does not attempt to present any new complications of tuberculosis. It is an analysis of certain practical problems which are worrysome and at times difficult of solution in the feeding of tubercluous patients.

The majority of gastric and intestinal symptoms in patients suffering from pulmonary tuberculosis are most probably due to toxemia, functional disturbances, dietary indiscretions or temperamental peculiarities.

Gastric tuberculosis per se is very rare, and intestinal tuberculosis, except in advanced cases, should only be diagnosed after most careful investigation and giving the patient the benefit of the doubt. Where definite intestinal tuberculosis has been absolutely verified, surgery may prove palliative.

It is most important to study the psychology of every patient—to recognize that adult digestions differ, and not attempt to feed patients by any fixed rule, but to carefully differentiate and individualize.

In abdominal pain and diarrhea calcium chloride 5 per cent injected intravenously is of considerable benefit.

The Problem of the Medical Parasite—The charge that the practice of medicine is not an exact science has been permitted to go unchallenged for so long that the statement has come to be generally accepted as true. Medicine is entitled to be called a science, and much of it exact science. The facts of anatomy are fixed and constant. Pathology is almost as constant as anatomy. Chemistry and physics are everywhere regarded as sciences. Bacteriology is as exact as botany, and botany is certainly entitled to rank with the other subdivisions of the great comprehensive science of biology. There is nothing in human experience that is entitled without reserve to be called exact—not even mathematics.

Most of the States have fairly good medical laws, but through most of them runs a common weakness— a section containing a list of "exemptions."

Under this heading will be found such medical parasites as have been legalized by indirect means. The problem of the medical parasite is peculiar to our own country. No other political subdivision of the civilized world gives legal sanction to the exploitation of its sick. One searches in vain through the medical laws of the nations of the earth sufficiently advanced to have medical laws, for any parallel to the desecration of medical law that prevails in our own United States of America. The composite list of the parasites found under the "exemptions" of the various States is a long one—and it is growing. The Legislatures of the different States are struggling valiantly to overtake the demand. The task seems well nigh hopeless, still there is, as yet, no sign of giving up the chase.

Laws that grant "limited licenses" to persons of limited qualifications are not laws in the interest of public safety. The "limited" applies only to the qualifications of the holder of the license. There is no limit to the character of the ailments that the "limited" license entitles its holder to attempt to treat. If the "limited license" were limited in the sense that diseases to which the specified limited treatment was unsuited could not be dealt with, some of the danger might be eliminated. As it is, some of the most pernicious of these "limited" practitioners treat in their own limited way diseases which are necessarily fatal unless treated by methods which by law are denied to the holder of said limited license. The law plainly says that certain methods of treatment are forbidden, but is silent on the vital point of what diseases must not be treated by the limited methods permitted the holder of the limited license. Withholding the proper treatment may cause the death of the patient just as surely as applying the wrong treatment. The limited practitioner not infrequently makes away with his patient by this indirect method. This way of killing people is legalized in many of the States—and Illinois is one of them.—(Illinois Medical Journal, June, 1922.)

AMOEBIC ABSCESS OF THE LIVER*

By HORACE J. BROWN, M. D., Goldfield, Nev.

For one who has always practiced in the temperate zone to write about amoebic abscess of the liver would seem to be presumptious, to say the least, since probably ninety per cent of such cases are seen in the tropics, and those that we see in this latitude usually give a history of having resided in the tropics. I must give as my excuse for writing on this subject my belief that I have found an important symptom that has heretofore been overlooked. While it may be a case of "the inexperienced finding all of the wonderful cases," I can at least say that the records seem to support me in my belief. In order to be as brief as possible, I will report a case that came under my care recently.

CASE REPORT

Mr. P. C. had been given a diagnosis of cancer of the liver and stomach, with a hopeless prognosis. One month later he entered the hospital, begging that something be done for him to relieve his suffering. The patient was a miner, 57 years old, and a native of Genoa, Italy. He came to the United States in 1893 and lived for about fourteen years in Seattle and Alaska. For the last fifteen years he has lived in Nevada, except for six weeks spent in Los Angeles for medical treatment in 1916. The first illness he remembers was in 1906, when he began having dysentery and hemorrhoids. He failed to get relief until 1918, when an examination of his stools showed entamoeba histolitica, and he was quickly cured with ipecac (this information was obtained from the physician that treated him). His family history was negative. His chief complaint was nausea, vomiting, pain in epigastrium, and loss of weight. A carefully kept chart from June 8 until July 5 (1921) showed a temperature never above 99 and pulse never over 84, with no chills or sweats. Patient stated that he had never had either chills or sweats. His present trouble began to manifest itself in the fall of 1919, when he began having epigastric distress. At the time of examination his temperature was 98.6, pulse 84, respiration 20, the heart action being irregular. Weight 130 pounds, normal weight 165 pounds. He had an appearance of general malaise, with an expression of depression. In general appearance he was tall, thin, stooped, with lustreless eyes with slight injection of the conjunctivae. The teeth showed extensive pyorrhoea. The tongue was moist and coated moderately. The lungs were normal, as was the heart, except for the irregular action noted above. Palpation showed a large tumor in the upper abdomen which filled the epigastric and right hypochondriac regions. Urinalysis was entirely negative, except for the presence of a small amount of indican. The examination of the feces did not show either blood or amoeba. The blood count showed 8500 white cells with 60 per cent polymorphonuclears, red cells 4,000,000, and a negative Wassermann. The test meal showed the entire absence of hydrochloric acid in the stomach, and repeated examinations failed to show any blood. The X-ray pictures showed a large subdiaphramatic tumor pushing a normal stomach downward and to the left. On palpation the tumor was found to be smooth with no nodules palpable anywhere on its surface. The patient's skin was sallow and of a muddy color. A diagnosis of amoebic abscess of the liver was made and on July 5th an incision was made three inches to the right of the median line, in the upper abdomen, and the abscess drained of a little over two pints of pus, in which no amoeba were found. The abscess was in the right lobe of the liver, and the pus was mostly thin and white. The gall bladder was distended and slightly inflamed, and there was considerable thickening of the cystic duct, but the gall bladder emptied easily under pressure. The other abdominal organs were normal. The abscess cavity was irrigated daily with an iodine solution and the patient given, by hypodermic, one c. c of emetine solution daily for twelve days. Recovery was uneventful and he left the hospital on August 26th with only a small discharging sinus which healed in three or four weeks.

The points of particular interest in this case are the absence of all signs of pus, the fact that he contracted the disease in this latitude, and the absence of hydrochloric acid in the stomach. A careful search of the literature fails to show any detailed report of the analysis of the stomach contents and, in fact, only one author mentions it at all. W. J. Mallory (Journal A. M. A., Vol. 75, Page 1774, 1920) reports the examination of the stomach contents, but with a negative result. He also states that "amoebic dysentery, and therefore amoebic abscess of the liver, may occur in persons who have never been in tropical or subtropical countries." I have had one other case of dysentery due to the entamoeba histolitica in Nevada, but that case has not as yet developed abscess, and I have been unable to learn of any other cases. I have reported this case in order to bring out the following facts: (1) Owing to the rarity of amoebic abscess of the liver in this latitude, there is the danger of overlooking the condition unless every facility is used to aid in the diagnosis. (2) The peculiar condition in this case wherein all of the signs and symptoms of pus were lacking, i e., the normal blood count and the absence of chills, fever and sweating. (3) The possible value as a sign of achlorhydria, as found in this case.

* Read before the Fifty-first Annual Meeting of the Medical Society of the State of California, Yosemite Valley, May, 1922.

Medical Licensure in Illinois—Following the licensure scandal in Illinois a year ago, at least two investigating bodies have recommended to Governor Small that Director W. H. H. Miller be removed or suspended from office. One was the special committee apointed by the governor himself to make an investigation. Nevertheless, the governor has refused to heed the recommnedations. Although Director Miller was charged with trafficking in examination papers and physicians' and pharmacists' licenses, his attorneys are attempting to prove, not that Miller et al. were not guilty of the acts indicated, but that they were violating no law and, therefore, that the acts did not constitute a crime! How will the licensing boards of other states regard these actions? Will they be willing to continue reciprocal relations with Illinois when the licenses granted are under such suspicion? Can any excuse be found for such bartering in certificates and licenses as has apparently been done? How about the interests of the public which the state employe is supposed to conserve?—Journal A. M. A., July 22, 1922.

As Lightning Precedes Thunder—When psychoanalysis was more a study and less a fad, Mrs. Elsie Lincoln Benedict, lecturer, traveled singly. But not so now. She marched into the Whitcomb Hotel yesterday with a retinue of some twenty people—lecturers, assistant lecturers, brainologists, personalitists, psychologists and mental analysts. Mrs. Benedict is the daughter of a former mayor of Pomona. She is registered from Detroit.—San Francisco Examiner, June 24, 1922.

THE DIAGNOSIS AND TREATMENT OF GALL BLADDER DISEASE.*

By WALTER C. ALVAREZ, M. D.

PART II.

The first installment of my article, published last month, dealt largely with what not to do in the diagnosis and treatment of gall bladder disease; this second part will deal briefly with the things which I think should be done.

THE FREQUENCY OF GALL BLADDER DISEASE

First, I should state that statistics from many sources show that from five to twelve per cent of all women coming to autopsy have gall stones. If we exclude women under fifty, the percentage is still higher. This alone would be bad enough, but we know that there must be a still larger group of men and women in the community suffering from the pre-calculous stages of cholecystitis. There would seem, then, to be no escape from the conclusion that even the careful clinician is not making the diagnosis of gall bladder disease often enough. The writer gets the idea sometimes that he is becoming mentally warped on the subject because he suspects cholecystitis in every old lady who comes in with flatulence and abdominal pain; and then along come a few autopsies or operations on his patients and he discovers a number of gall stones, the presence of which he had not even suspected.

Now, how are we going to recognize a larger percentage of these cases?

A GOOD HISTORY

First, and above everything, comes a good history. A case will often seem puzzling until skillful questioning brings out the story of one or more attacks of supposed ptomaine poisoning which really had all the earmarks of gall stone colic. The physician must remember that recurrent attacks of severe pain which perhaps waken the patient out of a sound sleep and which leave her upper abdomen sore for days afterwards are due to organic disease; they cannot be ascribed to a neurosis or to slight indiscretions in diet. In the most typical cases the pain begins in the liver region and runs up into the right shoulder blade. Often there is a constant ache on the right side. The soreness is aggravated by riding over a rough road or by reaching up on a shelf. Women perhaps will be unable to bear the pressure of their corsets in the liver region. In milder cases and in the intervals between attacks, the patients complain mainly of belching and bloating. They often feel "bilious" and get a little sallow. Only rarely are they jaundiced. Nausea, regurgitation of food and heartburn are common. Vomiting often comes during the attacks of pain.

Most characteristic and helpful is the patient's statement that although she has a fine appetite she is afraid to eat. She dreads the return of pain. Yet she will admit that what she eats seems to have little or nothing to do with the coming of an attack. She may get a bad one after a week of fasting, and later she may digest a Thanksgiving dinner without discomfort.

Several suggestive points may be mentioned. A history of a useless appendectomy shows that the symptoms were so bad that the patient was willing to do anything to get well. A history of typhoid fever, chronic sinusitis, empyema, or any other severe and prolonged infectious process is helpful because such things often leave the gall bladder damaged irreparably.

The presence of arthritis, myocarditis and certain forms of headache and dizziness is suggestive because these troubles sometimes clear up after cholecystectomy.

THE PHYSICAL EXAMINATION

This generally shows a woman between forty and sixty-five although, as our experience grows, we are going to recognize cholecystitis more and more in the twenties and thirties, and even in childhood when the trouble often begins. In subacute cases the patient gives a jump when a deep breath brings the tender liver edge down against the palpating hand (positive Murphy's maneuver). The presence of fibroids in the uterus, or other pelvic abnormalities, greatly increases the probability of finding gall bladder disease.

ROENTGEN-RAY EXAMINATION

This can help greatly in several ways. First, it may exclude the presence of other organic lesions such as ulcers and carcinomas.. Second it may show the shadow of stones or of a thickened gall bladder on the plate. Unfortunately most of the diseased gall bladders are free from stones and so thin-walled that they will not show on the plate. Furthermore, many stones are too soft to give a shadow. Third, the screen examination often shows many suggestive things. Cardiospasm is often seen, and I am coming to think more and more of it as an indicator of gall bladder disease. The stomach is often hypertonic and overly active; and not infrequently the pyloric antrum is contracted and sharply conical in shape. There may be some gastric stasis, and it may also be apparent to an experienced observer that the gastric mucosa is dry (achyliac). The duodenal cap is sometimes deformed by adhesions or pressure, and it may also show defects in emptying. The colonic haustration is often exaggerated. The liver is not infrequently enlarged from the cirrhosis attendant upon prolonged infection of the bile ducts.

LABORATORY TESTS

Gastric analysis often shows an achlorhydria. In the first part of my paper I have explained why I think the Meltzer-Lyon test should not be used diagnostically.

TREATMENT

Like appendicitis, gall bladder disease may go on and kill the patient or it may clear up even without treatment. Once cleared up, it may leave the victim alone or it may come back at intervals until finally something has to be done. We know now that it is best and safest to take diseased appendices out. Unfortunately, we do not know

* Read before the Section on General Medicine of the Medical Society of California May 16, 1922 at Yosemite National Park.

yet what to do with the early cases of gall bladder disease. If we could only look into the future for the different individuals it would be easy. When I see women about sixty-five, emaciated, worn with suffering, anxious for an operation which they cannot well stand, I tell myself that it is my moral duty to urge the younger ones to go to the surgeon. When, however, I see a series of women about forty who have gone ten or fifteen years without attacks or much distress, I waver, and am inclined, as is the patient, to let well enough alone.

Unfortunately, it seems impossible to say when these people are really "cured" and free from the menace of their diseased bile tracts. Thus, one would think, after several attacks of gall stone colic that an interval of twenty years without troublesome symptoms would indicate a cure, but I have seen a woman in whom such a period of relief was really only an interlude. When she was sixty-one her troubles returned; a plate showed that a stone still remained, and an operation showed that a carcinoma had developed somewhere in the biliary tract.

It is hard to say whether medical treatment does much good because remissions occur so frequently and come so suddenly. Ordinarily it is well to advise a smooth, cellulose-poor diet; that is, without salads, coarse vegetables, or fruits. Some people are helped by the taking of Carlsbad salts in hot water before breakfast. Belching and heartburn are often helped by the giving of sodium bicarbonate and magnesia. Hoffman's anodyne often brings relief during attacks at night. During paroxysms of pain, paregoric, morphine and papaverin have to be used. The physician should remind the patients who are losing weight that they will probably have trouble whether they eat or not, so that they had better eat and keep their strength.

DIFFERENT TYPES

For therapeutic purposes the cases may at present be divided into six or seven groups. Medical treatment should be reserved for:

First, those who are in the early stages of the disease, with mild symptoms and long intervals of relief, whose bodies are still young and strong, and who may perhaps yet hope permanently to overcome the infection.

Second, those whose symptoms and findings strongly suggest the presence of cholecystitis but who are suffering so much from nervousness, menopausal storms, hypertension, or myocarditis that it is a question whether they would be any better off even if a markedly diseased gall bladder could be removed safely. These people must be studied carefully before any decision is made in regard to operation.

Third, those who need and want an operation but who, on account of complications, cannot undergo it with any prospect of success.

Fourth, those who have had a cholecystectomy but who still suffer. Many of these people might have gotten a perfect result if they had been put on a smooth diet after operation.

In the absence of definite contra-indications operation should be advised for:

First, those who have reached that stage of the disease in which the attacks are getting steadily worse and more frequent.

Second, those whose indigestion is severe enough to interfere with ability to work and to enjoy life. They should be the more willing to accept operation if they have an arthritis, headaches, dizziness or myocarditis, which may perhaps be cured by the removal of the infected gall bladder.

Third, those who have had their gall bladders drained and who had gotten relief, but who now return with pain and perhaps with new stones.

Finally, and this is a most important point: The surgeon must be willing to admit that at the time of operation he cannot tell a diseased from a normal gall bladder. Men of experience know that not infrequently gall bladders which, according to the history, must have been discharging stones off and on for twenty years, are found at operation to be still soft and apparently normal. If they were not full of stones the surgeon would generally pass them by as inocuous. This does not mean that I am arguing for the reckless removal of gall bladders. Far be it from me; but as Judd says, there is no doubt that in many cases if the patient is to be helped, his gall bladder must be removed on the strength of a careful history taken by an experienced man. This removal can be done with more confidence if there are no other signs of disease in the abdomen to explain the severe symptoms, and if there are adhesions about the gall bladder, an enlarged gland near the cystic duct, an enlarged liver and signs of perihepatitis and pancreatitis. I am convinced that the poor results obtained in many of the cases of operative interference for duodenal ulcer can be ascribed to the leaving behind of gall bladders which had become badly involved in the inflammatory process about the bowel.

Training in Sociology and Public Health an Essential in Medical Education—S. W. Welch, Montgomery, Ala., suggests five essentials which should be made a part of a student's medical education: (1) He needs to have a sympathetic understanding of the fundamental human problems in relation to the many complexities of modern life, and must become familiar with the trend of the best thinking along social lines. (2) He needs to know the place and function of sanitation in relation to the public welfare, the how and when and why of environmental influence on health. (3) He needs to be well grounded in the control of the communicable diseases and in bacteriology. (4) It is imperative that he should have a knowledge of hygiene, especially in its relation to the social and medical sciences which attempt to improve the race by approximating a solution of the basic problems of human existence; that is, the problems associated with the necessity for food, shelter, defense and propagation. (5) He needs to have a knowledge of psychology in its relation to conduct, with regard both to individuals and to groups, in order that he may truly educate both individuals and groups in right habits of action, by supplying motives which appeal to them.—Journal A. M. A., July 29, 1922.

CHRONIC SUPPURATIVE PAROTITIS WITH ACUTE EXACERBATIONS*

By HENRY J. PROFANT, M. D., Santa Barbara
(From the Santa Barbara Clinic)

The parotid gland is subject to two separate inflammatory reactions: the epidemic parotitis or mumps, and the secondary or sometimes called symptomatic parotitis. Mumps appear as a peculiar, primary, infectious disease, usually epidemic, and are rather common. The contagious character, regular incubation period and typical course suggest that the disease is due to a specific organism, but this has not been definitely determined. Suppuration scarcely ever occurs in genuine mumps. The secondary form, acute suppurative parotitis, is a rare condition, as one finds upon referring to the literature on the subject. The case I wish to report is of special interest because of the repeated acute attacks imposed on a chronic suppurative parotitis.

HISTORY

The history is as follows: Mrs. W., age 61, American, was always delicate as a child, and had measles, malaria, chicken-pox, frequent peritonsillar abscesses and typhoid fever. At the age of twelve she had mumps of the right parotid gland with an uneventful recovery. During adolescence and early womanhood she enjoyed fairly good health, but was never robust. Since then she was operated for a strangulated ovarian cyst and had the left breast removed for a suspected carcinoma. At the age of forty the right parotid gland became acutely inflamed. No operation or serious illness preceded this attack, and for a time it was considered as another attack of mumps. However, after the acute symptoms subsided the gland failed to return to normal. Each day it was distended with a thick yellowish-white material, which would not evacuate spontaneously but had to be expressed from the gland through the duct. This condition has remained and has behaved analogous to a chronic suppurative dacryocystitis, with recurring acute attacks. In the past twenty years she has had fifteen acute attacks varying in severity and duration. Unfortunately this affection is only one of many other disorders, and her chief complaint is a severe bronchial asthma which began fourteen years ago. Since the onset she has sought relief in many parts of the country, but it is one of those severe forms of asthma in which practically everything has been tried with disappointing results. Lack of time prevents me from considering the asthmatic condition except from the standpoint of the possible relationship to the parotid gland and vice versa. The chronic suppurative condition of the gland is determined by an examination of the material which is expressed daily. The smears show numerous pus cells, and cultures usually show staphylococci, although at intervals streptococci viridans have been isolated. I have personally observed the last two acute attacks.

The first of these occurred in May, 1921, and according to the reports of the patient's daughter, who is her constant companion, the attack followed the usual course of the preceding severe ones. I was called because the patient could not empty the gland. There was a swelling the size of a walnut, but no external signs of inflammation; no redness or tenderness. As had been done in the previous attacks, I probed the duct, found it patent, and injected normal salt solution. Heat was applied externally. These measures were continued daily, but no drainage was obtained. The gland increased in size and by the third day became tense, tender and painful. The temperature rose to 102 and the white count to 15,000. Large doses of bromides and codeine became necessary. An X-ray was taken, but no calculi were seen. The fifth day drainage began spontaneously and foul-smelling pus exuded from the duct in which streptococci viridans were isolated. By the twelfth day the gland resumed its chronic condition.

The past two years the patient has been confined to bed because of the severe asthma, an alarming attack occurring every two or three months. The first week in April of this year she had a violent gastric upset with nausea and vomiting, and it was necessary to give merely glucose per rectum for two days. Milk was resumed when the attack subsided.

A few days later, April 15, the gland again failed to empty. The course differed this time in that the gland failed to drain the fifth day. Expression of the gland and duct, probing and injection of one to two ccs. of normal salt solution were again attempted. On the sixth day the skin over the gland became red and in spots almost purplish, and an edema of the cheeks and eyes occurred. The temperature rose to 101 and remained about that until the seventh day, when there was a decided chill, followed by a temperature of 104 and a white count of 20,000. Any operative interference had been delayed because of the fear of a permanent fistula, and the fact that in the fifteen other attacks the pus eventually drained through the duct, but this time the general condition demanded interference. An ounce of foul yellowish pus was aspirated from a point of fluctuation 2 cm. from the angle of the jaw, and a drain introduced. A blood culture taken at this time was negative. Dr. Andrews, who had seen the patient during an acute attack five years ago, suggested intramuscular injections of 5 cc. sterile milk every third day for its alexin action. Good drainage was maintained, the inflammation gradually subsided, and in two weeks the wound closed spontaneously. The gland has again resumed its chronic condition. The observation of the two acute attacks and a study of the cases reported in the literature lead to several conclusions. A brief review of the essential points of the anatomy and physiology of the gland is necessary.

ANATOMY AND PHYSIOLOGY

You recall that a simple gland is one which remains undivided; and that a compound gland, on the other hand, is one that breaks up into two or more branches, and may be tubular, alveolar or of a mixed tubular and alveolar form. The parotid gland is a typical compound acinous gland; that is, it is composed of a main duct which branches and re-branches freely. The terminal divisions of the ducts end finally in specialized secreting parts known as the acini. The gross structure of the gland consists of a number of masses, often as large as peas, which are surrounded and held together by connective tissue. These are known as lobes, which in turn are made up of a number of smaller masses known as the lobules. The parotid fascia, which is a continuation of the deep cervical fascia, forms a firm capsule for the gland. The main duct (Stenson's) opens into the vestibule of the mouth by a very small orifice opposite the crown of the second upper molar tooth. Its turn around the anterior border of the masseter muscle must be borne in mind in passing the probe into the duct from the mouth. The salivary glands secrete under nerve stimulation. The parotid nerves are derived from

* Read before the Fifty-first Annual Meeting of the Medical Society of the State of California, Yosemite Valley, May, 1922.

the auriculo-temporal and from the sympathetic. An inhibition of secretion is therefore an inhibition primarily through the nervous system.

ETIOLOGY

Acute suppurative parotitis, as stated before, is a secondary condition and may occur in the course of an infectious disease, but most of the cases reported are those occurring as a post-operative complication. There is a diversity of opinion as to the etiology. Paget in 1886 proposed the term sympathetic parotitis. He observed that the cases usually followed operations on the ovaries or other genital organs.

Hauan and Pilliet first suggested in 1889 that parotitis could occur as a secondary infection of Stenson's duct by mouth organisms, called an ascending infection. They demonstrated that the inflammatory processes begin in the center of each lobule and spread later to its periphery. A number of men accept this theory. Frank reports cases following appendicitis, one fatal, and concluded that its origin is due to an ascending infection of Stenson's duct. Collins reports eight cases, post-operative, with four fatalities, and concludes that its development is favored by a dry condition of the mouth and a lack of fluids in the body, and that it is an ascending infection. Clause and Duplay concluded from clinical observations and experiments on animals that infection of the parotid occurs in abnormally predisposing conditions; that micro-organisms introduced must be excessive in number and very virulent; that the general vitality of the animal must be lowered and that the normal secretion of the parotid altered in quantity and in quality.

Fisher reports twenty cases, and after a careful study of the subject concludes that septic parotitis is hematogenous in origin; that secretion of the gland is under the influence of nerve stimuli; and that the incidence of post-operative parotid involvement is neurologically dependent upon surgical shock or inhibition of the secretory and trophic fibers from higher psychic centers. Deaver classifies post-operative parotitis into three groups: metastatic, occurring only in pyaemic condition; escending parotitis due to ascending infection via the duct; and traumatic, the result of direct pressure on the parotid gland. Blair believes neither theory, hematogenous or ascending, is above dispute. The behavior of one of his cases has suggested to him the probability of stone irritation or obstruction.

There are two essential factors in the production of an acute attack of parotitis. There is a predisposing cause and an existing cause. The latter, of course, is the infection, which may be hematogenous, ascending through the duct or in the gland as a chronic infection. The predisposing cause is apparently more important, and this is the inactivity of the gland. The inactivity due either to inhibition of secretion by shock or lack of stimulation from oral starvation. This inactivity is illustrated in the report of Rolleston and Oliver following the medical treatment of 1000 cases of gastric ulcer; they found that secondary parotitis occurred ten and a half times more frequently in cases treated by oral starvation than in those allowed food by mouth. Preceding the present acute attack, as mentioned above, the patient has a gastric upset in which it was necessary to institute oral starvation for two days. The inactivity of the gland apparently produces a stasis which increases the susceptibility of the gland.

The treatment of this affection may be considered under prophylactic and active. The former consists in maintaining an active secretion of the gland. Fenwick, in an article entitled "The prevention of Parotitis During Rectal Feeding," states that he had the patients suck an India rubber teat about two inches long, which produced the desired effect. Collins states that a good way to excite the secretions of the mouth and keep the current of saliva is to allow the patient to suck on a stick of lemon candy after operation. In the active treatment of an acute attack one must consider the general condition of the patient and the severity of the local condition. Morestin, in 1907, advocated expression of the duct; he reported a post-operative case which became fluctuant and was relieved by this means. Picque pointed out that when suppuration occurs it results rapidly and habitually within thirty-six hours of the infection. He states that nothing from a clinical standpoint allows any differentiation, at least in the beginning, between the gangrenous and other types. The gangrenous types always appeared fatal to Picque. He never allows a parotitis to evolve spontaneously. Wagner, in 1904, stated that post-operative parotitis ends in death in 30 per cent of the cases. Lequen in 1907 emphasized the fact that when the treatment is by incision the surgeon must not count upon finding fluctuation. Owing to the very close texture of the parotid, the pus infiltration into the glandular tissues, creates multiple pockets, and, exceptionally, collects. He concludes that a single incision sometimes is sufficient, but often multiple incisions are necessary. Gary, in 1911, stated that suppuration is not always easy to recognize; and he has noted a rupture through the skin, auditory canal, sheath of sterno-mastoid, mediastinum, and a retropharyngeal abscess formed. In their reports Frank, Blair, Collins, Deaver and Fisher advise early incision and drainage. You recall that the essential pathology of an acute inflammation is a swelling of the epithelial cells of the acini. This hypertrophy causes a blocking of the many collecting tubules, a retention of saliva results, and with the continued inflammatory reaction the gland becomes swollen. The parotid fascia forms a firm capsule about the gland, and pain results from the marked tension. It is essentially a pressure pain. Suppuration increases the severity of the condition, but because of the firmness of the parotid sheath its degree cannot be determined. The treatment, therefore, must aim to reduce the inflammation, relieve the pain and promote drainage. The probing of the duct is a good means of determining the presence of a stone, but when it is found patent no further use is necessary. I have been convinced that the attempted irrigations of the gland through the duct with the hope of "soften-

ing the material" is unsatisfactory. Immediately following the injection the pressure pain increases in severity. As long as the epithelial cells are swollen and compress the collecting tubules leading to the duct, the many branches cannot be reached by probing or irrigation. What benefit may be derived by this means is greatly offset by the increased pain, edema of the surrounding structures, and the fact that drainage is not established or the course of the acute attack shortened. Heat locally and at times alternating with cold compresses are the best means of reducing the inflammation and pain.

Reports show that the condition must be considered seriously; the mortality has been given as high as 30 per cent. The consensus of opinion is that if the inflammation is increasing, or is no better by the fourth day, the gland should be incised and drained.

CONCLUSIONS

That chronic suppurative parotitis with acute exacerbations is a rare condition.

That an acute attack is predisposed by inactivity of the gland.

That susceptibility of the gland is favored by stasis.

That the exciting cause is an infection present in the chronic condition of the gland.

That the prophylactic treatment is the maintenance of an active secretion.

That the active treatment is local application of heat alternating with cold.

That the condition must be regarded with concern and drainage established by free incision whenever the general symptoms warrant.

(1421 State Street)

Syphilis of the Lung—The results of a study of all the patients admitted to the Cincinnati Tuberculosis Sanatorium (a municipal institution) for two years are given by Alfred Friedlander and R. J. Erickson, Cincinnati (Journal A. M. A., July 22, 1922). About 65 per cent of the cases belong to the far-advanced group. During 1920-1921, 791 adult patients were admitted to the sanatorium. Thirteen per cent of all patients living had positive blood Wassermann tests; 17 per cent of all patients dying had had positive Wassermann tests. In this series of 791 cases, the diagnosis of pulmonary syphilis was made in four (0.5 per cent). All four cases occurred in white patients, three men and one woman. The diagnosis of pulmonary syphilis was not made in any of the 182 colored patients. The woman with pulmonary syphilis died; she had a combination of pulmonary tuberculosis and syphilis. The three men recovered, two under intensive antisyphilitic treatment, the third without such treatment. In addition to these four cases, two other cases of pulmonary syphilis from the wards of the Cincinnati General Hospital are reported.

Utah State Medical Association—The twenty-eighth annual session of the Utah Medical Association will be held in Salt Lake City August 31, September 1 and 2. Among the interested features of this meeting will be the course in clinical diagnosis to be conducted by Harlow Brooks of New York City. The clinics will be held daily in the County Hospital in Salt Lake City. The program of the State meeting contains many interesting papers by the physicians and members of the Utah State Society and distinguished guests. A. C. Behle is president of the society and William L. Rich secretary.

WHY MEDICAL SOCIAL SERVICE DESERVES A PLACE IN HOSPITAL ORGANIZATION, AND THE DUTIES OF MEDICAL SOCIAL WORKERS TOWARD HOSPITAL ADMINISTRATION

By FRANKLIN R. NUZUM, M. D., Santa Barbara, Cal.

In approaching the question as to why medical social service should occupy a place in hospital organization, let us review briefly the four duties of a hospital. They are:

1. The care of the sick.
2. The advance of medical science.
3. Making the hospital a center for activities concerning preventive medicine and community health.
4. The training of hospital personnel.

The care of the sick has been considered a duty belonging solely to the hospital. The medical responsibility rests with the physician. But the hospital and the physician have both found that medical social service is of great aid in obtaining the co-operation of the patient, in carrying out medical orders more effectively, and as a result of these and other helps actually hastening convalescence. In short, this means that the medical social worker is materially aiding in the care of the sick. In 1898 Sir Wm. Osler said as he looked over the patients collected in a medical dispensary: "If three out of ten of these get what they really need we are doing well. We are not equipped to treat the other seven." This statement still holds true. Why? Because the other seven need more than medicine and surgery. They need personal contact and help of various kinds, such as medical social workers are trained to give. This help is primarily therapeutic and of a kind hitherto much neglected. And what does this mean to the patient? Let an illustration answer. A patient is admitted to the hospital with a decompensated heart. He has but a limited fund of money for the care of his family while he is out of work. He does not do well in the hospital, because he soon finds that he will require a longer period of rest than the fund for the maintenance of his family will permit. He worries, he becomes restive, and in spite of the fact that the hospital and physicians are giving good service and treatment, the patient is not doing well. How many times has such a patient left the hospital and returned to work? But he is soon back. The hospital might have avoided repeated readmissions and would have been financially ahead if the patient in the first instance had remained under treatment a proper time.

In a similar instance which I have in mind the medical social worker was the first to report to the physician that a certain patient, on account of worry concerning the welfare of his family, was contemplating leaving the hospital much too soon. Through her service the family was temporarily provided for, the patient's mind was placed at ease, and his acute nephritis cleared up splendidly. Can anyone gainsay that the service of the medical social worker in effecting mental rest and co-operation on the part of the

patient was not an important feature of the medical care in bringing about that patient's recovery? Thus medical social service is directly concerned with the first duty of the hospital as outlined above, which is the care of the sick.

The second duty of the modern hospital, the advancement of medical science, is likewise interrelated with the functions of the medical social worker. The advancement of medical science depends not alone upon research work in the laboratory, but upon critical study of clinical records and case reports. As Haven Emerson has said: "Before we can claim to be developing or even protecting health we must know the sum and character of human sickness. Our first and best and perhaps our last, source of information will be the organized medical service shops, the hospitals, the dispensaries, the sanatoria, convalescent homes and domiciles of the insane, of children, of paupers, and those great institutions now infiltrated throughout the country, the visiting nurse association, whose experience and records offer often a greater range and bulk of material than the larger hospitals of a city or State all combined." It at once becomes apparent that the records of the medical social workers are important, not alone in the care and treatment of the individual patient, but from an altogether different angle, that of investigation or research. A study of these records as furnished by the numerous groups of social medical workers throughout this country will afford a great amount of material for the study of diseases from an angle heretofore little considered. And it will represent material that cannot be gotten so well in any other way.

This brings up the importance of the records kept by the medical social worker. Her record concerning the diagnosis of the patient's illness, the treatment, the follow-up notes and the final result should be carefully and accurately done. Since they may some time be used in an intensive study of economic or disease conditions in a given locality, or in many other ways, their value will be in direct proportion to the care and thoroughness that was spent in their making. When completed such a social history should be filed as part of the hospital record. In the event that the patient was not a hospital case, it should then be filed in the out-patient department, so that it is accessible to any one who may profit from its study.

For many years the average hospital required no medical history at all. But the importance of a reliable medical history is so great from so many standpoints, including the matter of research, that medical organizations are expending great effort in improving the character of those histories throughout the hospital world. And since the records of the medical social workers are likewise valuable as a part of the complete record, they should be carefully compiled. In a word, the organized body of medical social workers should realize the value of good record keeping on their part, and thus make their material available now, rather than waiting for years until some organized effort becomes necessary to awaken them to a realization of this duty.

The third duty that hospitals must assume, though many have not as yet done so, is to make themselves community centers in better health instruction and preventive medicine. And what better way is there by which a hospital may bring a community to the realization of its worth? Or bring the community to comprehend the great asset its hospital is? Up to the present some have been interested only in the patient himself, endeavoring to rid him of his disease. We are just beginning to be concerned about the members of his immediate family, whom possibly we may save from illness altogether. "Man does not live unto himself alone." And it is just as true that "if one wishes to be well he must be certain that his neighbors are well." One of the most important lessons taught by medical science has been the significance of environment and the community aspect of disease. Some individuals may have inherited certain predispositions or physical weaknesses. It is then important that all that is possible is done for his own physical well-being. In this way he may be prevented from contracting an illness, or, once the victim of a chronic illness, he may be prevented from passing it on. Greater good will result from preventive medicine, from protecting many in addition to caring for the person who is ill. To help the "other seven" is the medical social worker's problem, and if a hospital or a physician wishes to succeed in this work they must use as their assistants trained workers in this field.

In short, the time is at hand when the hospital may entrench itself firmly in its community by seizing upon this opportunity for the spread of knowledge concerning public health problems and preventive medicine. There are many ways for the hospital to go about this. One agency that can be used with greater effect than all others is the medical social worker department.

There remains the fourth duty of the hospital, the training of hospital personnel, administrators, internes and nurses, as well as medical social workers and other technicians. If hospitals do not train their employes, from whence is a supply to be obtained? And what department in the hospital is better able to train medical social workers than that department itself? The need for such work in every hospital maintaining a clinic is great. The greatest difficulty has been the backwardness on the part of the hospital authorities, often through lack of funds, to develop such a department. In answer to this, it has been shown that such a department actually saves its cost by lessening the number of clinic patient days in the hospital. The supply of trained medical social workers is limited, and any hospital maintaining such a department has the responsibility of training social workers, just as it should train the others of its personnel.

Since the medical social worker fits logically into each of the four undertakings of a hospital, it is apparent that this department should have a definite place in the hospital organization. The more prominence it is given, the greater will be

the return, not alone to the hospital, but to the community. The medical social worker offers an excellent means of obtaining and holding the community interest, because her appeal is through personal service and effort. And the interest of a community in its hospital is vital to the welfare of the hospital.

The duties of medical social workers toward hospital administration are four at least:

1. The making of social and economic diagnoses.
2. Making accurate records, including treatment and follow-up notes.
3. Saving hospital days for the institution.
4. Acquainting the community with the value of its hospital.

The making of social and economic diagnoses is an important obligation, and the hospital administration looks to the medical social worker for its accomplishment. The importance of this diagnosis cannot be over-estimated in outlining for the clinic patient his treatment and after care. It is well enough for the physician to tell the patient with cardiac disease that he must live on the ground floor and have a light occupation. But if left to the patient, nothing will result from the advice. The medical social worker, having investigated the home conditions, instructs the patient in things that especially pertain to his well-being. And through some relief agency the patient is materially assisted in getting an abode on the first floor and in obtaining light work. As a result, the patient is able to earn some part at least of his living and is not continually returning as a hospital patient.

Dispensing of material relief is not the function of the medical social worker. Combining material relief and medical aid in the same person often spoils the possibilities of the latter. The duty of the medical social worker is therapeutic. She should not lessen the possibility of the success of her undertaking by doing things which in general practice have been proven harmful. Nor should she use her time in doing things which some other organization can do better, and which is outside her field as a technical assistant to the physician.

The second duty of the medical social worker to the hospital administration is the keeping of a creditable record for the information of the physician of the work that she is doing with each patient. If she has recorded properly the social and economic diagnosis, the treatment, the progress of the patient, the reasons for poor progress if there be any, and other follow-up notes, much valuable assistance is at once available to the physician. She often finds the first information of the beginning of an epidemic of disease, and her records accumulate important statistical data. Much information may be recorded, the value of which is not at all suspected at the time the record is being made. The importance of carefully kept records and of their finally being filed as a part of the hospital record warrants a repetition of the statement made earlier in the paper, that if the medical social worker has any obligation to the hospital administration at all, it is that of turning over records which show real thought and careful work, and which will be useful to the physician.

The saving of hospital days is a third duty of the medical social worker to the hospital administration. This is of benefit as an economic measure. A patient's sojourn in a hospital may often be materially reduced as a result of the ministrations of the medical social worker. Such instances have been referred to. Or the patient's convalescence may be completed in his own home under the medical social worker's supervision, who makes contact both with the patient and the physician. In either event the hospital has a bed that may be used for other purposes.

Another financial assistance that may be rendered the hospital administration is at the admitting clerk's desk. No one is in a better position to know or to find out the financial status of a clinic patient and of his ability to pay at least part of his expense. It has often been said that the expense of the medical social department may be more than met in this way.

And finally the last, but not the least, of the medical social worker's duties toward the hospital administration is that of acquainting the public with the worth to the community of a good hospital. The medical social worker is in one sense a field agent of the hospital, and she has many opportunities to interest various groups of people in the undertakings of her institution. A hospital holding the confidence of its community stands as a bulwark against all the medical fakes and frauds that are found in California. And the opportunities which the medical social worker has to increase the confidence of the community in her institution must not be overlooked.

Medical and Hospital Work in Russia.—Moscow, July 3 (by mail)—Thirty-three physicians and surgeons, each in charge of one of the Moscow hospitals, have united in signing a letter of thanks to Dr. W. D. Nickelsen, medical supervisor of the Moscow District for the American Relief Administration. The letter follows:

"At the moment when the Moscow city hospitals were insufficiently supplied with food and other necessaries for the care and cure of the sick, the American Relief Administration came of its own accord to the assistance of those hospitals, supplying them regularly with medicines, instruments, things needed for the care and treatment of the patients, linen, blankets, gowns, and also took upon itself the supplementary feeding of the patients. This assistance has greatly improved the condition of the patients and has also helped to check disease in general.

Being aware of the great good done by the humanitarian activities of the American Relief Administration, the chief physicians of the Moscow hospitals are conveying to that organization, in the person of the chief of the Moscow section, their sincere appreciation for its present activities and its readiness to continue that work in the future."

OBSERVATIONS ON THE CARDIOVASCULAR SYSTEM IN THYROID DISEASE*

By WM. J. KERR, M. D., Associate Professor of Medicine, and GEORGE C. HENSEL, M. D., San Francisco.

The changes produced in the cardiovascular system by thyroid disease have long been appreciated by clinicians. There is need, however, to review some of the more important features observed, so that patients with grave cardiac disorders will not be subjected to unnecessary risk at operation nor will they be denied adequate treatment to support and restore the circulation.

It is our purpose to call attention to some irregularities of the heart in thyroid disease which are extremely common and which are not emphasized sufficiently in the literature. These irregularities play a considerable part in determining the outcome of the more severe cases and their recognition is not difficult.

The studies on which this report is based have been carried on at the University of California during the past two years.

GENERAL CONSIDERATIONS

Of the one hundred and eighty-one goiters studied, one hundred and twenty-three were classified as adenomas and fifty-eight as hyperplasias. In reviewing the adenomas, no attempt has been made to draw a sharp distinction between the toxic and non-toxic types. Approximately half of these cases showed no signs of toxicity and in a relatively small number the goiter produced pressure symptoms only. The average age was forty-six years and a tumor was noted at the average age of twenty-nine years, or seventeen years before appearing for treatment. Symptoms had been present on the average for eight and three-tenths years. Females were affected one hundred and six times and males seventeen times. Cardiovascular symptoms were more or less marked in forty-four per cent of the cases. Rapid and forceful beating of the heart and "palpitation" were the symptoms usually complained of, although vasomotor disturbances, irregularities of the heart, dyspnoea and breathlessness were frequently noted. Pain in the region of the heart and anginal attacks were rare. Central nervous system symptoms, including nervousness, tremors, astasia abasia and emotional instability were described in fifty-eight cases. Gastrointestinal symptoms, usually diarrhoea or diarrhoea alternating with constipation, were complained of in only four cases. There was marked progressive loss of weight in eight cases and a gain in two cases. In no case was there marked exopthalmos. When the eye changes were noted, usually only one or two of the minor signs were described. The average basal metabolic rate, when determined, was 30.2 per cent above the theoretical normal, but when the non-toxic cases were excluded, the average rate was 47 per cent above the theoretical normal. There were two deaths.

Of the fifty-eight cases with hyperplasia, forty-four presented exophthalmos and other eye signs and in five others these eye signs were slight or doubtful. The average age was thirty-six and four-tenths years and the tumor was observed at the average age of thirty-three and nine-tenths years, or two and five-tenths years before entering the hospital for treatment. Females were affected forty-three times and males fifteen times. Symptoms had been present for a relatively brief period. In about one-third of the cases, the tumor was noticed before the onset of symptoms; in about one-third the appearance of the symptoms preceded the discovery of the tumor; and in the remainder the symptoms and tumor appeared at the same time. The average duration of symptoms was about three months. Cardiovascular symptoms were complained of in 91 per cent of the cases. "Palpitation" and rapid, forceful beating of the heart were usually present; irregularities, dyspnoea, breathlessness and vaso-motor disturbances were common. Fifteen cases presented signs of decompensation. Central nervous system symptoms were present in fifty-six cases and were more pronounced than with the adenomas. Gastrointestinal symptoms such as diarrhoea and vomiting were complained of in seventeen cases. There was a definite loss of weight in thirty-eight cases. The basal metabolic rate averaged 58.7 per cent above the theoretical normal. There were seven deaths.

SPECIAL CONSIDERATIONS OF THE CARDIOVASCULAR SYSTEM

Symptoms—A brief statement of the cardiovascular symptoms is given above. It is the prevailing opinion that the hyperplastic goiter causes more profound changes in the circulatory system than is found in association with toxic adenomas. Our observations suggest, however, that, so far as the heart is concerned, the disturbances are practically the same in both groups. Where differences occurred, they seemed to be due mainly to the degree of toxicity. The vascular system, however, showed more pronounced changes in the hyperplastic group than in the group of adenomas. Among the earliest symptoms were tachycardia and a consciousness of the heart beat. Many patients complained of attacks of "palpitation." These spells, which were more frequent later in the disease, probably represent paroxysmal attacks of auricular fibrillation or flutter. Throbbing of the vessels in the neck and periphery, pulsation in the thyroid and a heaving precordium were usually marked in severe cases. Sleep was frequently interfered with because of these sensations and such patients preferred to lie on the right side. Dyspnoea and breathlessness on exertion, and in the later stages cough, progressive edema, cyanosis and other signs of decompensation were observed where proper treatment had not been instituted. Goiters producing pressure symptoms were relatively infrequent causes of cardiovascular disturbances as compared with the overacting glands.

Physical Signs—Inspection in the early cases revealed very little aside from a forceful apex impulse in the usual position, slightly increased carotid pulsations and flushing of the face and neck. As the disease advanced, the apex impulse

* From the Medical Division, University of California Hospital. Summary of paper read before the Section on General Medicine, California Medical Association Meeting, Yosemite National Park, May 15 to 18, 1922.

(Most of the patients were on the surgical service of Dr. W. I. Terry, to whom we are indebted for the opportunity of making the studies here reported.)

became more forceful with a diffuse heaving of the precordium. The apex impulse was then displaced to the left and, in later stages, downward. The carotid arteries and peripheral vessels showed increased pulsations, and capillary pulsation was frequently noted, especially in the hyperplastic cases. When the myocardium began to fail, the venous pressure rose, the veins stood out and they occasionally showed unusual systolitic pulsations extending to the lower arm and hand (noted in three of our cases). When decompensation began, the usual signs appeared: such as pulsating liver, systolic venous pulse in the neck, edema of the lungs and edema of the legs advancing to anasarca. During the stage of decompensation, the heart was frequently irregular and no sign of an A-wave could be found in records from the jugular vein. On palpation the apex impulse was usually forceful and showed no displacement in early cases; but as the condition advanced, the impulse became more marked and diffuse, and it moved to the left and downward. A systolic or presystolic thrill at the apex, or a systolic thrill at the pulmonic area was noted in a few cases. A distinct shock was felt at the pulmonic area, accompanying the second sound. A systolic thrill was frequently felt over the thyroid vessels in hyperplastic glands, rarely in adenomas. The pulse was usually soft and oftentimes dichrotic. A water-hammer pulse was common in the hyperplasias. The rate was quickened in toxic cases, being ninety-three in the toxic adenomas and one hundred and seven in the hyperplasias in our series. In the early stages the pulse was generally regular, although a sinus arrythmia of the respiratory type was frequently observed. Later, many cases showed the more unusual types of irregularities, and in the terminal stages they were very commonly observed. By percussion the heart was found to be gradually enlarged to the left and downward, there was a well defined increase in dulness in the third and fourth left interspaces, as is seen in organic mitral disease, and later the dulness was increased to the right. Enlargement, usually to the left, was noted in forty-one of the adenomas and in forty-three hyperplasias. In the absence of thymic enlargement or a substernal extension of the thyroid, the substernal dulness was found to be increased, due to the dilatation of the great vessels. Auscultation revealed the signs of an overacting heart in toxic cases. The sounds were quickened, ringing and loud, giving an impression of hurried ineffectiveness. As the condition advanced, a soft systolic murmur was usually heard at the apex and a short, rough systolic murmur at the pulmonic area. Later a loud systolic murmur was frequently heard all over the precordium and was transmitted to the vessels of the neck, with a bruit over the thyroid vessels and gland. A definite bruit was noted over the gland in thirty-three of our cases of hyperplastic thyroids and in only three of the cases with adenomas. In the advanced stages of myocardial failure a diastolic murmur was occasionally heard at the pulmonic area or a soft systolic murmur appeared over the tricuspid area. Murmurs were noted in our series in forty-three cases of adenomas and in forty-six cases of hyperplasia.

An unusually large number of cardiac irregularities were observed. Of sinus arrhythmia we have no accurate data, as its finding was considered of little significance. It was frequently observed and possibly should be further studied. Extrasystoles were observed in only nine cases and in two of these it is probable that an unrecognized auricular fibrillation was present. Auricular fibrillation was observed in twenty-nine cases, occurring in nine cases with adenomas and twenty cases with hyperplasia. In fifteen of the twenty-nine cases the fibrillation was paroxysmal in type and in several cases many attacks were observed. In eight cases auricular fibrillation alternated with auricular flutter, and in two cases auricular flutter was observed alone. Paroxysmal auricular tachycardia with a rate of one hundred and ninety occurred in one case. (See Table 3.)

These observations on the frequency of cardiac irregularities have suggested that many of the attacks of "palpitation" which patients describe are due to a disturbance of the normal mechanism of the heart beat by the inception of one of these unusual rhythms. Such attacks frequently came on suddenly and usually lasted only a short time. They were accompanied by a sense of fulness in the chest, a disagreeable, rapid, forceful action of the heart, flushing of the face and neck, and breathlessness. The termination was usually abrupt.

On questioning patients who were seen during attacks of auricular fibrillation of flutter, it was found that their sensations were the same as those experienced during the previous spells of so-called palpitation. In our opinion this shows pretty clearly that what they call palpitation is really the result of serious auricular fibrillation or flutter. We feel sure that this has not been sufficiently recognized in the past.

X-ray studies on the toxic cases generally showed the heart to be enlarged to the left with widening in the region of the conus and left auricle—the so-called "mitral type." In some cases, particularly of the hyperplastic group, the heart was of the "aortic type" with the great-vessel shadow definitely increased.

Blood-pressure determination showed in the adenomas an average of 133 mm. Hg. (systolic), 78 mm. Hg. (diastolic) and a pulse pressure of 55 mm. Hg., while in the hyperplasias the average was 141 mm. Hg. (systolic) and 71 mm. Hg. (disastolic) with a pulse pressure of 70 mm. Hg. In several cases where the systolic and diastolic pressures were high before operation, a marked fall was observed following surgical treatment. Some of the more striking examples are shown in Tables 4 and 5. In one patient with a hyperplastic goiter who had a blood pressure of 200/100 on admission, there was a fall to 178/65 after medical treatment.

Venous Pressures and Pulsations—No attempt was made to measure accurately the venous pressures, but in advanced cases the pressure in the veins was definitely increased. In three cases we observed pulsating peripheral veins in the arms and hands, which cleared up after treatment.

Electrocardiagraph and Polygraph tracings were made on most of the cases showing unusual ir-

TABLE 1

General Findings

Type of goiter	No. of cases	Sex	Average age	Average age tumor noted	Average duration of symptoms	No. with eye signs	No. with C. N. S. symptoms	No. with gastro-intestinal symptoms	Marked loss of weight	Average basal metabolism	No. of deaths
Adenomas toxic and non-toxic	123	M. 17 F. 106	41.38 yrs.	29.2 yrs.	8.3 yrs.	1 slight 6 doubtful	58	4	8	30.2% plus (all forms) 47% plus (toxic only)	2
Hyperplasias	58	M. 15 F. 43	36.4 yrs.	33.9 yrs.	3 mos.	44 5 doubtful	56	17	38	58.7% plus	7

TABLE 2

General Cardiovascular Findings

Type of goiter	No. of cases	Cardiac symptoms	Per cent with cardiac symptoms	Average pulse rate	Average Blood pressure mm. Hg. Systolic	Average Blood pressure mm. Hg. Diastolic	Average pulse pressure mm. Hg.	No. with cardiac enlargement	No. with murmurs	No. with bruit over thyroid or T. arteries	No. with signs of decompensation
Adenomas toxic and non-toxic	123	54	44%	85 (95 in toxic cases)	133	78	55	41	43	3	3
Hyperplasias	58	53	91%	107	141	71	70	43	46	33	15*

* Three of these cases presented unusual and marked systolic pulsations of the veins of the forearms and hands.

TABLE 3

Cardiac Irregularities

Type of Goiter	No. of Cases	Auricular Fibrillation	Auricular Flutter	Paroxysmal Tachycardia	Extra-systoles	Sinus Arrhythmia
Adenomas toxic and non-toxic	123	9 (4 paroxysmal) (2 alternating with auricular flutter)	3 and 1 probable (2 alternating with auricular fibrillation)	1 (rate 190)	6, including 2 cases of probable auricular fibrillation	Frequent No exact data
Hyperplasias	58	20 (11 paroxysmal) (6 alternating with auricular flutter)	4 and 2 probable (all alternating with auricular fibrillation)	0	3	Frequent No exact data
Totals	181	29	7 3 probable	1	7 2 doubtful	Frequent

TABLE 4

TOXIC ADENOMAS

Blood Pressure, mm. Hg.

Case No.	Before Operation	After Operation	Six Months Later
11447	215/105	140/80	170/90
12349	190/100	140/70	
12778	160/80	128/75	
13489	150/80	124/60	
11755	188/100	133/70	
13828	190/95	130/70	
13451	180/110	145/90	
8541	190/100	160/80	
10757	238/142	160/100	

TABLE 5

HYPERPLASIAS

Blood Pressure, mm. Hg.

Case No.	Before Operation	After Operation
12976	152/86	122/82
11586	145/65	138/45
10444	140/90	128/75

regularities and on some of the uncomplicated cases. Twenty-five cases were studied at intervals during their stay in the hospital. In addition to the changes in rhythm noted, there were certain variations in the auricular complex which were frequently observed in more severe cases. The P-waves were widened and increased in amplitude, frequently slightly notched in Lead I and having a diphasic character in Lead III. These features were noted in ten out of fourteen cases with regular rhythm. The P-R interval was 5/25 seconds in three cases and there was an arborization block in one case. Bundle branch lesions were not observed. Right hypertrophy was shown in two cases and left hypertrophy in three cases. The T-wave, when flattened or inverted in Leads I and II, has been found to indicate a bad prognosis in accordance with the findings of Krumbhaar. In our series there were six of such cases, all showing advanced myocardial disease and, as was to be expected, two or thirty-three per cent of them died.

Diagnosis—The diagnosis of the types of goiter studied were made on the clinical signs and symptoms combined with pathological findings at operation and necropsy. The cardiac symptoms and signs were usually obvious, although careful observation and instrumental means were frequently necessary to differentiate the irregularities encountered.

Treatment—No preliminary treatment was given in the non-toxic or moderately toxic adenomas previous to operation. The patients with more advanced toxic adenomas, with signs of cardiac failure, and many of the patients with hyperplasias were given preliminary medical treatment or received medical treatment alone. Mental and physical rest was insisted upon. Bromides or quinine hydrobromate were given when indicated. Ice bags were used over the thyroid gland and heart in the more toxic cases with considerable relief from distressing symptoms. Digitalis in the form of tincture was used, when indicated, under careful supervision. In moderate doses the drug produced excellent results and was very useful in controlling and possibly in preventing attacks of abnormal cardiac rhythms, particularly auricular fibrillation. One patient died during operation, possibly from the effects of excessive digitalization with "ventricular standstill." Another death occurred from auricular fibrillation with marked signs of thyrotoxicosis developing two days after operation. Quinidin sulphate seemed to have a beneficial effect in controlling attacks of auricular fibrillation in one case, although of no great benefit in several others. Cardiac decompensation has been treated by the approved methods, although excessive purgation has been very exhausting in some cases. X-ray treatment was used in many cases of hyperplasia before operation and in a few was the only local treatment employed. Radium emanations in bare tubes of 6-10 mc. were inserted into some of the more serious hyperplastic goiters with marked improvement. (These cases are being reported elsewhere by Dr. W. I. Terry.) Various methods of surgical treatment were employed, including ligation, enucleation of adenomata, partial lobectomy, bilateral subtotal lobectomy, etc.

One of the most striking observations made in this series of cases has been the degree of cardiac relief noted by the patient after removal of an overacting thyroid gland.

Prognosis—In our series it has been demonstrated that the condition of the heart generally determined the outcome of the case. Deaths from other causes, except marked increase of toxicity following operation in severe cases, were rare. Electrocardiographic demonstration of flattened or inverted T-waves in Leads I and II have indicated an unfavorable outcome. Heart block and disorders of the cardiac rhythm have been noted in the more severe cases. Signs of decompensation and advancing edema have indicated prolonged medical treatment or radio-therapy. Embolism and coronary disease were rare. Focal necroses of the liver and pancreas followed operation in one case and caused the death of the patient.

Mortality—In our series there were nine deaths, seven occurring in cases with hyperplasia, one with a mixed gland and one with an adenoma of the plunging type. In six of the nine cases death would be attributed to cardiac disease. In one of these there was embolism of the right subclavian artery. One patient had frequent attacks of angina pectoris and paroxysms of auricular fibrillation. In four cases auricular fibrillation was present at some time while under observation. Three cases presented unusual liver findings at necropsy and will be reported elsewhere at a later date. Two of the patients received medical treatment only.

CONCLUSIONS

The cardiovascular changes in thyroid disease are progressive, and in the most severe cases dominate the clinical picture.

The cardiac signs and symptoms in toxic adenomas and hyperplasias differ only with the degree of toxicity. The vascular changes are more marked in the cases of hyperplastic goiter.

Cardiac irregularities are more common than is generally recognized. Auricular fibrillation or auricular flutter, usually paroxysmal in type, occurred in about a third of all toxic cases. We believe that such paroxysmal attacks explain the periods of palpitation which are described by a large percentage of patients.

The prognosis depends in a large measure upon the condition of the circulation. If surgical treatment is to be carried out, the "time and extent of the operation should be governed by the circulatory condition."

Treatment of the thyroid heart depends on the stage of the disease. In all cases every measure should be employed to relieve the myocardium. Rest is essential. Sedative drugs are of some value. Elimination should be kept up. Digitalis is of great value in controlling auricular fibrillation and may be of value in preventing paroxysmal attacks. The amount required in controlling auricular fibrillation is usually less than in ordinary cardiac cases. It should be continued over long periods. Decompensation should be treated as in other myocardial cases.

The electrocardiogram is of value in recognizing myocardial changes in differentiating the types of irregularities and in prognosis.

STUDIES IN URETERAL CATHETERIZATION. PRELIMINARY REPORT *

By HENRY A. R. KREUTZMANN, M. D., San Francisco

Catheterization of the ureters is often accompanied by severe pain, hematuria and sometimes even by temporary anuria. In performing catheterization at the present time, it is customary to insert the catheters the entire length of the ureters so that the distal ends enter the renal pelves. This is done in order to minimize the leakage of urine into the bladder and to prevent the catheter from being pulled out of the ureter on withdrawing the cystoscope from the bladder.

This study was undertaken in an attempt to determine whether or not the present disadvantages of ureteral catheterization could be overcome by inserting the catheters only part way into the ureters. The problem has not been solved but the investigations have brought out some interesting facts.

The technic used is as follows: The patient was subjected to catheterization three times, with an interval of one week between each operation. No. 6 ureteral catheters were used throughout. At the first sitting they were inserted five centimeters into each ureter, the second time fourteen centimeters and the third time the full distance into the kidney pelvis. One cubic centimeter of phenolsulphonphthalein solution was injected intravenously with a record syringe after the catheters were inserted. None of the patients were given water to drink after receiving the phthalein.

The appearance time was noted and two fifteen-minute specimens of urine were collected from each side. The cystoscope during this time was not removed. At the end of the half-hour test, with the catheters still in situ, the bladder was washed through the cystoscope until the irrigating solution failed to show a trace of phthalein. At the same time the position of the catheters was verified by looking through the cystoscope. The three distances chosen for inserting the catheters was with the intention of having their tips each time past one of the three anatomic points of constriction of the ureters. A Dunning calorimeter was used to make the phthalein determinations. The subjects used in this study had no known pathological condition of the kidneys, ureters or bladder, with the exception of two cases which had been treated previously for pyelitis.

The following points were noted at each level: the character of the urinary flow from the end of the catheters; the presence or absence of pain, haemorrhage and anuria; the appearance time of the dye; the amount of phthalein obtained from the catheters from the right and left kidneys over two fifteen minute periods; the entire amount of phthalein eliminated in half an hour and the amount of bladder leakage.

It soon became apparent that the same person did not excrete the same amount of dye at each of the three tests, therefore the bladder leakage was figured not in the percentage of phthalein which the calorimeter showed, but in percentage of the total elimination for half an hour. As was anticipated, the farther the catheters were inserted into the ureters, the greater was the likelihood of having pain, haemorrhage and anuria. It always has been a mooted question whether or not the insertion of ureteral catheters has a stimulating or a depressing action on the kidneys. In our series of twelve cases, the average appearance time was less at five centimeters than at the other two levels. The total average phthalein output was less when the catheters were inserted their full distance than at five and fourteen centimeter levels. These two facts point to an inhibiting and not to a stimulating action of the catheters. In six of the twelve cases, with the catheters inserted five centimeters into the ureters, the phthalein leakage varied between 14.7 and 69.8 per cent. In the other six cases there was only a trace. Because of this great amount of leakage in half of the cases, accurate determinations of relative kidney function cannot be obtained when the catheters are inserted only a short distance into the ureters.

Contrary to all expectations, the amount of leakage did not decrease at the higher levels, but on the contrary, it increased progressively. It appeared that once the resistance of the first point of constriction, namely the uretero-vesical sphincter, was overcome, there was nothing to hold back the leakage. For example, Case IV showed no leakage at five centimeters. At fourteen centimeters the leakage was 8 per cent and at the full distance, the leakage was 42.8 per cent. This progressively increasing amount of leakage was constant throughout the series, with the exception of three cases. One of these three, and the only one in the series, showed a trace of leakage at all three levels. The other two were the cases which had been treated a short time before for an infection of the kidney pelvis.

From the information obtained in regard to the leakage, it appears that the only constriction of importance is the one at the junction of the ureter and the bladder, and that the passage of a medium sized catheter causes a passive dilitation of this sphincter. These facts are of practical value in comparative kidney tests, in pyelography and in pelvic levage. If it is necessary to repeat the comparative kidney function it should not be done until sufficient time has elapsed for the uretero-vesical sphincter to regain its tone.

Pyelography, when necessary, should be performed at the same sitting in order to have the minimum of leakage and insure a clean cut shadow of the kidney pelvis. When, as at present, pelvic levage is performed two and three times a week, we believe its chief value lies in the dilatation and free drainage which is produced, and not in the bactericidal action of the drug used.

SUMMARY

In ureteral catheterization, the occurrence of pain, haematuria and anuria increases in direct ratio to the distances which the catheters are inserted.

Catheterization as at present performed has most frequently a depressing action on the kidney function.

* Read before the Fifty-first Annual Meeting of the Medical Society of the State of California, Yosemite Valley, May, 1922.

Accurate information as to relative kidney function cannot be obtained if the catheters are inserted only a few centimeters into the ureters.

The only constriction of importance in ureteral catheterization is the one at the junction of the ureter and the bladder.

Passage of a medium sized catheter causes a passive dilitation of the uretero-vesical sphincter which lasts at least one week.

Repeated catheterization causes still greater dilitation of the sphincter with a further increase in the amount of leakage.

The points brought out in this study are of value in comparative kidney tests, in pyelography and in pelvic levage.

SUMMARY OF THE TWELVE CASES INVESTIGATED

Distance Inserted	Pain	Haem.	Anuria	App. Time Min.	R. K. L. K. Leakage	Bladder Leakage Per Cent
5 cm.	1	0	0	3.7	51	18.3
14 cm.	2	1	1	4.8	53.8	27.1
Full	4	3	1	4.2	46	30.1

(323 Geary Street)

The Maternity Welfare Law—"We are glad that a paper on this important topic is to be read at our annual meeting, because renewed interest has been interjected into its study by the recently expressed opinion of the Attorney-General of Massachusetts that it is unconstitutional. Leaving this for the Bench and the lawyers to decide, our attention is seriously called to a study of what appears to be another blow on the entering wedge of state medicine started by the Narcotic law. If we permit our rights to be infringed repeatedly, we shall fall ere long into the degraded condition of the profession in foreign lands. . . . Some readers of the law claim that they do not see any harm in it, whilst its opponents want to know if there is any good in its provisions. They do not see how maternal mortality can be prevented or infantile care advanced by mere political investigations. They think that the attending physicians know more about their patients than the best of officials. Some say that it is dishonest for some States to steal from others, or to utilize for the benefit of their expectant mothers and newborn infants money extorted by taxation from neighboring States, as this law directs. . . . It is said, additionally, that the death rate in infants under one year of age is greater in Biddleford than in any city in the nation. If so, at whose door is the fault to be laid? It would seem better to save these infants first, and to print statistics to be forwarded to Washington afterward. It is said by friends of the law that there will be no house visitations and therefore no interference with our practice. If, however, there is no penalty attached to such visitations, they will soon be made, because they are indispensable to investigating studies to be sent to Washington. So, too, all laws can be amended, and when it is found that without visitations nothing is gained, amendments will make them compulsory. Our State Board of Health is not so overburdened with work that it cannot study maternal welfare right on the spot, and fully as well as when supervised at Washington. It is a confession of our weakness and imbecility to ask outsiders to do our medical preventive work."—(Maine Medical Journal, June, 1922.)

THE TREATMENT OF HYPEREMESIS GRAVIDARUM*

By G. CARL H. McPHEETERS, M. D., Fresno, Cal.

As shown by the title, it is not the purpose of this paper to classify the toxemias of pregnancy, or to theorize regarding their etiology. It is merely intended to pass on to the profession what has been learned from practical experience in attempting to control what De Lee styles "the obstinate, the uncontrollable, the incoercible vomiting of pregnancy." The excuse for the paper, if any were made, lies in the fact that about one-half of all pregnant women suffer with nausea and vomiting during pregnancy. So common is it that the mass of the laity regard it as a normal accompaniment of pregnancy and do not know that any therapeutic relief can be obtained. How frequently one sees the expectant mother struggle in vain in the latter half of pregnancy to regain the flesh and blood she lost because of nausea and vomiting during the earlier months.

In considering the treatment, it is the practice of the writer to differentiate as sharply as possible between the mild and the severe type of vomiting in pregnancy. Suffice it to say that by the severe type is meant the toxemic, or dangerous and frequently fatal type. Every patient reporting nausea or vomiting should be treated at once, even though her nausea is of the mild type, because one can never know beforehand that the mild type may not grow rapidly worse at any time and become toxic. Also, most observers agree unanimously that the nausea and vomiting of pregnancy yields best to immediate treatment and is less easily handled if there is delay in beginning remedial measures.

The treatment usually given to the mild type case is as follows: The patient is not kept in bed unless she is one whose nausea borders upon the pernicious, or toxic type. Every patient is requested to present a specimen of vomitus at the office for inspection and analysis, if practical.

An initial catharsis, consisting of calomel, gr. 1 to 1½ in ¼-gr. divided doses followed by magnesium citrate, oz. viii, is administered. The patient is advised to take the calomel in the forenoon and the magnesium citrate solution just before lunch or early in the afternoon of the next day, whichever suits her best. Patients not usually nauseated the first thing in the morning may take the calomel in the afternoon and the magnesium citrate solution on waking the next morning, an hour before breakfast.†

A few patients dislike magnesium citrate solution, but tolerate magnesium sulphate solution, one ounce following the calomel tablets. Some

* Read before the Sections on Obstetrics and Gynecology of the Medical Society of California, at Yosemite National Park, May 17, 1922.

† It is found that magnesium citrate solution is often tolerated best by the empty stomach when taken hot. The patient is instruced to open the bottle of magnesium citrate solution, pour the contents into a large, thin drinking glass and set the glass in hot water until the solution is as hot as can be taken readily. Patients are warned never to set the unopened bottle of solution in hot water, since an explosion may result either before or at the time it is opened. The escape of gas from the magnesium citrate solution on being heated in an open glass does not seem to lessen its cathartic properties.

patients who can not tolerate saline laxatives can use phenolphthalein quite successfully; others can use the combined calomel and phenolphthalein wafers with good results. Some initial enemata of plain boiled water containing soda bicarbonate 5 per cent are given before the calomel and saline laxatives. Patients reporting bile in the vomitus and whose specimens of vomited material show bile require this catharsis especially. In them also it is necessary to repeat the calomel and saline laxatives every second or third day to keep the bile moving onward rapidly through the intestine. Only when two or three days pass without vomiting may we safely forego laxatives for a few days. When a laxative is needed again it may be possible to use aromatic fluid extract of cascara, one to four teaspoonfuls at night, instead of the calomel and salines. Any subsequent vomiting of bile calls for a repetition of the small doses of calomel and the saline following. On days when no laxative is taken a cleansing soda enema should always be given at an hour best suited to the patient.

In the matter of diet every patient is a unique case. She has usually discarded most of the heavier foods before visiting the physician. In general, meat, cheese, eggs, beans, peas and other heavy protein foods should be eliminated at once. Also pastry and sweets, raw fruits and raw vegetables are forbidden. Those patients who retain one or two meals each day are instructed to take cereals with a little sugar and cream, milk, buttermilk, toast, crackers, the non-acid vegetables well cooked, and the mildly acid fruit juices from canned or freshly cooked peaches, pears, prunes or figs. Small portions of all foods are better tolerated than large portions. Patients who vomit breakfast only are instructed to omit breakfast at its usual hour and eat a light meal two or three hours later. Those who are hungry upon the limited fare allowed are told to take something, if only a glass of milk, or buttermilk, and a cracker every three or four hours. Five or six small meals daily are usually handled better than three larger meals. All the patients are instructed to drink two to eight quarts of measured water daily, depending upon the season of the year. Milk is best tolerated when diluted with lime water half and half. Also in this way some calcium is supplied the patient. Buttermilk, either plain or with the addition of a little sugar, or salt, is tolerated by some who can not take sweet milk; also freshly coagulated (clabbered) sour milk with a sprinkling of sugar is relished by an occasional patient who dislikes fresh milk. Bouillons, chicken broth with rice or barley, lamb broth, baked potatoes, spinach, fresh or canned, tender chicken, white fish, such as halibut, are gradually allowed to the patient who has ceased vomiting for one week. The patient must co-operate by adhering strictly to her diet schedule. Written instructions from the physician are indispensable.

Regarding medicines, few are given by mouth, except laxatives as outlined. Those having marked hyperacidity persisting after free catharsis are given a capsule containing extract nux vomica gr. 1/6, rhubarb gr. ½, soda bicarb. gr. iii and magnesium oxide gr. ii, one, two or three capsules before or after meals, which are usually retained. When capsules can not be swallowed, or retained, the above prescription may be given in liquid form, using three to five drops tincture nux vomica instead of the extract nux vomica. In addition to lime water given in milk, lime may be given by mouth in the form of the liquid hyposulphites of lime and soda to which is added Fowler's Solution in three-drop doses for the anemia. Calcium may also be given the patient subcutaneously in the form of Locke's Solution, if thought desirable.

As a routine, the writer is trying soluble extract corpora lutea, 1 cc. ampules injected in the median bacillic vein near the elbow once or twice daily. In more severe cases 2 cc. of the corpora lutea ampules are injected twice daily. From one to two dozen ampules are thus injected during the first three weeks after the patient presents herself. The extract corpora lutea may be injected in the gluteal or thigh muscles in patients not having accessible veins, but the preparation is irritating when used in the muscle. Whether the action of extract corpora lutea is suggestive, as De Lee supposes, or whether it does supply what the corpus lutem of pregnancy does not supply, as Hirst believes, is not known or proven. The writer, however, has no doubt of its definite value in scores of cases of hyperemesis gravidarum, in many of which it was the only treatment given. Further proof of its value is seen in those patients whose treatment with extract corpora lutea was interrupted after they had ceased to vomit for some days, but before they were well enough to eat a full diet. These patients invariably resumed vomiting and required one-half to one dozen or more injections.

It is well to warn the patient who has just ceased vomiting and begins to have some appetite that she must continue treatment until able to eat a full diet in order to be reasonably safe from disappointing relapses. Such relapses may carry the patient over into the class of severe or toxic cases. For anemia these patients are given iron and sodium cacodylate in addition to the Fowler's solution previously mentioned. Iron cacodylate, 1 cc., is given in the vein or in the muscle daily or on alternate days, as best tolerated. One to two dozen injections of iron cacodylate are given. The more anemic patients should also receive ½ gr. sodium cacodylate, alternating with the iron cacodylate. Most gratifying improvement in the red blood count, the hemoglobin and the blood pressure will occur within a month after the patient presents herself. Patients having focal infections will show less rapid blood improvement.

The eradication of focal infections is the most vital part of the treatment of hyperemesis gravidarum. The patient and her family often object to this most seriously, and it should not be undertaken lightly by the physician. Co-operation of a competent nose and throat specialist and a dentist, whom the patient trusts, is indispensable. Radiographs of all the teeth are made as a routine. Cultural evidence from nose and tonsilar crypts

is often of service in showing the patient that serious infection exists. In the routine search for foci of infection the ear, the cervix uteri, the anal margins, the urinary tract and Bartholin's and Skeene's glands should not be overlooked.

In the practice of the writer more than half of all patients who vomit in pregnancy exhibit focal infections; and of those having focal infections nearly all are found to have pathogenic bacteria in their catheterized urine. The co-operation of the urologist is of immense value in these cases.

The proper time to remove foci of infection in the nauseated patient is the first day when her condition will safely permit the procedure required, or as soon as her consent can be obtained thereafter.

The above treatment shortens the mild type of vomiting in pregnancy from its natural duration of two, three or four months to one, two or three weeks in most cases. It is unusual for any vomiting to occur after the second week. Treatment is usually continued four or five weeks in order to prevent relapse.

In considering the treatment of severe or toxic type of hyperemesis gravidarum, no description or attempt at classification will be set down here. These patients are invariably kept in bed. Those having a frank nephritis with or without hypertension, especially when the nephritis is accompanied by cardiac decompensation, should receive therapeutic abortion. Also the occasional patient who is tuberculous should be aborted without effort at other treatment for her vomiting. Patients showing no nephritis or tuberculosis have an encouraging outlook.

After the patient is secluded in a quiet room in her home, in a maternity, or, best of all, in a hospital, she is at once given extract corpora luteum, 1 or 2 cc., twice daily in the vein. The next step in treatment is the administration of copious sodium bicarbonate enemas. After an ordinary cleansing soapsuds enema has come away, two quarts of hot alkaline solution are administered slowly with a long colon tube, the patient in Sim's position on her right side. She is urged to retain as much of this as possible, just as long as she can. This is repeated night and morning for two or three days, longer if it can be tolerated by the bowel. During the first twenty-four hours a vigorous scrubbing of the teeth and tongue with the toothbrush is in order, using hot soda bicarbonate solution as a mouth wash. The foul taste in the mouth and offensive odor of the breath are often relieved at once. Severe cases often have an acetone odor to the breath, which persists until the patient begins to assimilate some nourishment. After the first day of fasting and enemas, the nurse offers the patient 8 to 12 ounces hot 5 per cent sodium bicarbonate solution on waking in the morning each day. This is commonly vomited, the vomitus containing a little bile-stained mucus. After vomiting the soda solution the patient should suck a ¼-grain calomel tablet and remain absolutely quiet for one hour. Then hot lime water, ounces 2, containing fresh whole milk, ounces 1 or 2, or malted milk, 1 teaspoonful, is offered to be sipped slowly through a tube without moving in bed. Some patients tolerate this better when given ice cold, especially in warm weather. Part or all of this may be vomited. It is surprising to everyone how often it is retained. Later in the day the lime water and milk may be repeated, or plain lime water containing the beaten white of an egg and a few drops of lemon juice. After two or three days of this the patient is placed gradually on a three or four hour feeding schedule, ounces 4 to 6 of lime water and milk mixture being most often given. Albumin water is better tolerated than plain water and quenches the thirst. As it is tolerated the milk may be increased until ounces 2 to 4 each of milk and lime water constitute a feeding. This point is sometimes reached in three to five days, the patient continuing to vomit once or twice daily, however. After two or three days' treatment a laxative must be tried. For this purpose ¼-gr. calomel tablets are given during the day, 1 gr. in all, and phenolax wafers, 3 to 6 in the evening. The results are uniformly satisfactory next day. After free catharsis the patient's fever often disappears and she feels much better.

The most severe cases will require gastric lavage with the stomach tube daily for many days before they can retain anything by mouth. After such lavage it is wise to deposit olive oil, ounces 2, containing castor oil drams 4, in the stomach, or a simple saturated magnesium sulphate solution, ounce 1, well diluted.

In the severest cases also rectal medication is often effective. After the usual morning soapsuds enema for cleansing, ounces 4 to 6 of hot water containing chloral hydrate, gr. 10, sodium bromide, gra. 20, and sodium bicarbonate, grs. 30, is deposited high in the bowel with the colon tube. The patient is admonished to lie quietly and retain it. This may be repeated at bedtime. Often the patient will obtain the first restful sleep in many days after this medication. In those cases suspected of having a thyroid deficiency large doses of thyroid gland may be administered in the above rectal medication. Feeding may also be carried out to a very limited extent per rectum, the most useful things being glucose solution 5 to 15 per cent in a small amount of milk. Both rectal medication and feeding are limited to use for three to five days only because of a gradually increasing irritability of the bowel. The occasional patient who dislikes milk in any form is a unique problem when vomiting in pregnancy. For her malted milk can be made up with water in place of milk, also malt soup, potato soup, pearl barley soup, albumin water or ice water, cereal gruels, cocoa and tea are useful, with lime water whenever it can be introduced. Calcium may be administered to these patients in the form of Locke's solution subcutaneously once or twice a day. Patients having extremely scanty urine are greatly benefited by the Locke's solution and also by physiological salt solution, if one is sure there is no nephritis. After one, two or three weeks of the above treatment, the most severely toxic patient is generally able to eat one or two light meals each day and retain them. The occasional hopeless case is apparent after one week

of faithful effort upon the part of nurse and physician.

CONCLUSIONS

The importance of hyperemesis gravidarum is urged by the writer because of the fact that one-half of all pregnant women suffer from it.

For purposes of treatment, the simple differentiation between mild and severe or toxic cases is sufficient.

All nausea and vomiting of pregnancy, however mild, should be treated carefully in the hope of preventing the development of pernicious or toxic vomiting with its terrible results.

The treatment of the mild type may be carried out in the physician's office, or in the home of the patient.

The treatment of the severe or toxic case should be carried out in a maternity, or a hospital, and the patient's family should be given to understand the gravity of the condition and the necessity for the utmost care.

An earnest appeal is made to the profession for more detailed attention to the treatment of hyperemesis gravidarum.

(1021 Mattei Bldg.)

DISCUSSION

L. G. McNeile, Los Angeles—The last thing that Dr. McPheeters said in connection with fifty per cent of all women having hyperemesis gravidarum I may have misunderstood. I think that is a mistake because hyperemesis gravidarum is toxic vomiting and we believe that fifty per cent of all pregnant women do have some vomiting, but we do not believe that they have toxic vomiting. I would say closer two, three, and the highest five per cent. We believe from our results in the South that you will get some results in about fifty per cent of cases if the patient is not a toxic case, by the use of corpus luteum as the Doctor advises. Fifty per cent of our toxic cases do not respond to corpus luteum by mouth or hyperdermically. In our toxic cases of vomiting we feel the importance of a patient fasting not less than seventy-two hours. Put the patient on sodium bromide by drop method, nothing by mouth, and give cleansing enema once or twice daily. We are very much interested at the present time in results of Titus' investigation regarding the use of glucose in various toxemias of pregnancy. I have used it in a few cases. Titus has published in the Journal of the American Medical Association of January, 1922, a series of approximately 150 cases of true pernicious vomiting, confirmed by laboratory examinations in which he only had to abort one case. Intravenous use of glucose has given good results in our hands. Only few have been tried but they seemed to confirm his results. Dr. McPheeters' paper shows a world of work and I wish to congratulate him for what he has done.

H. A. Stephenson, San Francisco—I haven't seen as many cases of pernicious vomiting as I would like to from a standpoint of experience, but I have not followed the line of treatment as outlined by Dr. McPheeters. I belong to that group that is somewhat at variance with his method of treatment in regard to diet. My experience is that, certainly 72 or even 120 hours of absolutely nothing by mouth gives better results in severely toxic cases than attempting to give them especially liquid or soft diet. It doesn't seem that it is very difficult to have soft or liquid diet returned, but it does seem to me that there is considerable more difficulty in having the patient bring up heavy foods such as outlined by Lynch in his treatment in this type of case. In all of my cases who have been very sick, as confirmed by laboratory tests, we have found that absolutely nothing by mouth, isolation from the patient's family immediately, under the strict supervision of a nurse, with perhaps the offering of food around the fourth or fifth day, meets with better success than trying to give liquid or soft diet. One interesting case has been aborted eleven times for pernicious vomiting, not by me but by other doctors. In spite of her repeated hyperemesis, laboratory tests did not show any toxemias. We believe that she was neurotic, because a great many of these patients do get the habit. One thing leads to another and soon the patient believes she cannot retain any food. After not allowing her to have any food for four days she asked the nurse for a hot water bottle. When the nurse removed the hot water bag, the hot water was gone. She was able to retain more or less of the hot water and after that we had no trouble. She gave birth to her first baby with her twelfth pregnancy. That may be an extreme case, but I do believe that fasting which Dr. McNiele has mentioned, with bromides rectally and alkaline and sugar solutions, we have used lactose rather than glucose, has given satisfying results. As to drugs in the mild cases, I have not been using the treatment outlined by Dr. McPheeters, but I have combined chloral hydrate, codeine, and extract of belladona, which we have found to be the most efficient of all drugs to be used by mouth. Corpus luteum given intravenously will give results in about one-half of the cases. I think with De Lee that a good many of the mild cases are pure neurotics and that may be demonstrated by the fact that a patient who says she can retain nothing when suddenly taken to a hotel and set before a big meal will be able to retain it. It is rather embarrassing not to retain it. Therefore, I believe that the way to treat these cases is by isolation, especially from the patient's family, strict supervision professionally, with treatment per rectum with alkaline and sugar solutions, generally is preferred until we determine after four or five days whether it is a true toxic case. The only treatment for true toxic cases, I believe, is a therapeutic abortion.

Margaret Schultze, San Francisco—At the University of California our treatment consists of isolation of the patient from her family cares and duties and placing her under the care of a special nurse. Nothing is given by mouth for usually 24 hours after the last time that she vomits, ordinarily that is about 48 to 72 hours. She is given at that time glucose and soda by rectum and is given large doses of bromides. Bromide is the only drug ordinarily used. The diet is then gradually begun 24 hours after the last vomiting and consists ordinarily of meat. Ordinarily, the first thing that is given is very hot steak, a small portion which is freshly cooked, and very hot. The patient is given at this time, also, some very crisp, dry bread, toasted, and is given a small amount of milk and cream. It is insisted very firmly that she must take all of this diet or she cannot have any. She is not allowed to choose. The psychic control is a very important feature. She must be made to understand that it can be controlled. At the beginning the diet is given usually about four times a day in small amounts and gradually increased. Acid fruits and acid vegetables are not added at any time, but certain vegetables may be given later on, green vegetables particularly. Results have been remarkably good. I have seen a great many treated and very few have not responded very quickly. In very severe cases abortion must be undertaken early.

Hamilton, Oakland—In January I had a patient to whom I gave corpus luteum, to which she responded. She vomited again and I again gave her corpus luteum and she once more responded. The next time I saw her personally, I gave her corpus luteum hyperdermically, intramuscularly and intravenously, and she came around a

little. A week before I came up here she began to vomit and again I gave her corpus luteum. We dilated the cervix enough to introduce a soft catheter equal to a colon tube, which turned on itself and was packed with gauze for twenty-four hours. Her blood count showed 17,800 white cells. The temperature was normal, 99, and pulse 100. Urine had X albumin and XXX casts. On the second day she had XX albumin. Three different urinalyses were done. She steadily improved from the time of putting in this large tube and we then gave her soda bicarbonate and glucose. I think there may have been some scar tissue in the cervix.

A. L. Munger, San Francisco—Dr. McPheeters mentions anemia. I do not know whether it is because in the last few years we have been making more careful examination of the blood or not, but at least the last couple of years I have been tremendously impressed with the pregnancy cases that were running a haemoglobin of 70% or under. I, like Dr. McPheeters, have gotten some very good results with the use of arsenic, but now use more Fowler's solution. With reference to infection, last year we had in the Clinic a U. C. man by the name of Dr. Nobbs who went over our patients' teeth very carefully. A large number of these were having difficulties of one sort or another. They got a tremendous amount of relief by having their mouths cleaned up. A large large number was also referred to the Nose and Throat Clinic. Occasionally one will find that these patients have cervicitis. Focal infection is something that should be seriously considered. In regard to my experience with corpus luteum, I have not had very good results in this respect. I would like to hear what somebody else thinks about it. In the majority of patients that I have given corpus luteum I have knocked the systolic blood pressure down to 100 and the patients have been so miserable from the hypotension that they were worse off than with their vomiting and refused to take any more corpus luteum.

I am tremendously interested in sterility, because it is a known fact that the native American woman is bearing fewer and fewer children as the decades go by. If she continues in her present rate of decrease, there will be no children born after a few more generations, and therefore I am interested in increasing the birth rate in California. We should do anything we can in the medical profession to encourage women to bear children. My paper last year at Coronado was designed for that purpose. I think if we can save babies from needless sacrifice and every woman from needless suffering during pregnancy we shall do a great deal to encourage the birth rate in California and in other States.

It is my belief that all vomiting of pregnancy is a toxic thing. I don't think there is any difference between the mild type and the severe type except in severity. I don't think there is any difference at all in the chemistry or biology of the thing except in the degree of severity. That all vomiting is toxic is my firm belief, and I think it will be proven. Those gentlemen who discussed the paper believe that 50 per cent only respond in general to corpus luteum. I think in many cases they did not give enough corpus luteum. I thought corpus luteum was of no value myself when I began using it, because I was content with giving half a dozen injections, and if the patient did not vomit for a day I stopped giving it and thought she was well. You must continue to give large amounts. If it reduces the blood pressure do not be discouraged: it will come up if you correct your anemia. In my cases, now numbering 1,000 (just before I came up to this meeting I passed the one thousandth case), in the treatment of hyperemesis gravidarum of pregnancy, or if you wish to call it something else, in the nausea and vomiting of pregnancy, in those I believe I have gotten 80 per cent of benefit from corpus luteum. I won't say that is what cured the patient or remedied her permanently, but I will say it benefited her because the other treatment was used along with it in most of the cases.

I regard the use of sodium bromide as excellent, but I would like to inquire of the gentlemen, why starve the patient two or three or four days longer? It has been my experience that the pernicious vomiting case has usually been starved pretty thoroughly for one week or two before she calls to see me. I tell the patient to call me at once the first day she is nauseated, but they will wait two or three weeks and vomit until they have an acidosis, if you please, and I inquire why starve them any longer? There is nothing in the stomach but mucous and bile: the patient has a fruity odor to the breath; she has lost from twenty to thirty, and in one case, thirty-nine pounds in the two weeks previous. Shall we starve her four days more? Let us begin to feed her something right away. She has dried out her body of all its fluids until her haemoglobin test is lowered and the viscosity is greatly increased. I think it is important to feed that patient liquids and as soon as possible solid foods. I like very much the remarks of the doctor on the psychic control of her patient, but I could not, for want of time, say anything about that, but it is well known that many of these cases would vomit from psychic causes and can be controlled especially by suggestion.

I am sorry that I cannot answer the question of Dr. Hamilton regarding scar tissue of the cervix. I think some one of the gynecologists could answer that.

Some Comparative Results in Cities and in Counties as Health Units—The fundamental principles involved in the prevention of typhoid fever, A. J. Warren, Topeka, Kan., says, are the same for the country as for the city, and they are the same the country over. The same is true of smallpox, diphtheria, infant mortality, and other diseases concerning which we have fairly accurate knowledge. The only difference is in the practical application of the fundamentals involved to the given area. And even here differences are apparent only in the execution of the details, and are not general. Natural factors also favor the country dweller, and the present conditions are a reproach to our lack of efforts and intelligence. An effort was made to determine the relative cost of, and effectiveness of, public health work in urban and in rural communities. A survey covering three cities and nine counties, all having well organized health departments, was undertaken. The evidence submitted proves, conclusively, nothing. It does, however, suggest that the charge that rural health work is more expensive and difficult than urban health work needs modification, if not a complete withdrawal.—Journal A. M. A., July 29, 1922.

EDITORIALS

NEW OFFICES OF THE STATE SOCIETY

The Society was notified on July 11, 1922, by the agents of the Butler building that the rent would be materially increased, and in order that the present offices might be held a lease for three years would have to be signed (in our case) by individual doctors. The general counsel for the Society refused to give his permission for the signing of such a lease by individuals, and, inasmuch as the lease could not be signed, the Society was compelled to look for other rooms.

Suitable offices have been found in the Balboa building, rooms 1015, 1016 and 1017, at Second and Market streets, just below the Palace Hotel, where it has been found that three rooms will suffice—four being occupied in the Butler building—at a material reduction in rental. In the new offices it will be feasible to use one less telephone than we are using at present, so that the move from all standpoints is advantageous, as the League for the Conservation of Public Health is at present located in this building because of the same circumstances.

THE PHYSICIAN AND "PRIVILEGED COMMUNICATIONS"

The confidences between patient and physician in all countries and in all times have partaken somewhat of the confessional. In most civilized countries and in practically all so-called non-civilized countries these confidences have been and are respected by law. In some of the States of the United States a physician is not permitted to testify as to knowledge obtained in his professional capacity. In other States and in other countries only certain classes of information are covered by the "privileged communication" provision of the law. In a few cases privileged communication is not recognized and physicians are required to testify regardless of the injury that such testimony may do to patients and family and regardless of the manner in which their information is received. This problem in general has been very well taken care of until the last few years. The development of State medicine and socialized medicine in its various forms struck a great blow to privileged communications between physician and patient. This is well illustrated in the Workmen's Compensation and Industrial Insurance Acts in various States. Other laws have been passed, one after the other, which in the aggregate have constantly restricted privileged communications, confidences that should be sacred between the sick patient and the physician. One of the latest inroads into this sacred covenant has been found in Great Britain, where it is generally known that State Medicine is in full bloom, so full in fact that most of the attractive petals are withered and falling from the flower. The British Medical Association in its recent convention condemned the destruction of the principle of the sacred covenant between patient and physician in measured terms. They recommended passage of legislation restoring to physicians of Great Britain the right to receive the confidence of their patients and to keep such confidences inviolate.

The Anti-Vivisectionists—The anti-vivisectionists are at it again. They have an initiative measure on the ballot this fall under which you may not perform an experiment on an animal, even under anesthetic or without pain, if the purpose is scientific investigation, but you may cut an animal open, mutilate or burn it, painfully and without anesthetic, if the purpose is convenience in farming. The law expressly says both of these things, in direct language. Animals may be caught alive, in steel traps, or shot and wounded, for sport or profit; they may be killed for food, painfully; they may be branded with hot iron, to identify them as property, or dehorned, gelded, spayed, castrated or caponized, without anesthetic, for convenience or luxury, and there is no law against it. In fact, these farming operations are expressly permitted, in this language, by the law. But the surgeon with a delicate and perhaps new operation to perform may not perfect his technique by doing it first on an animal, even under complete anesthesia. No drug may be tested, by administering it to an animal, first. No serum, to protect children against diphtheria, or even to protect other animals against anthrax or hog cholera, can be manufactured or tested.

A human being bitten by a mad dog must die of hydrophobia since the only known treatment involves inflicting a needle-prick on a rabbit, and this is forbidden. The botulinus investigations, without which the California fruit-canning industry would be ruined, are forbidden. It is forbidden to investigate the poisoning of orchard pests or their extermination by their natural enemies, or even to make experimental investigation of the diseases of plants. Present methods of combating anthrax and hog cholera are made penal offenses, and the treatment of diphtheria, lockjaw and meningitis by the methods approved by modern science are forbidden. The teaching of medicine, physiology and biology in the universities of California is made impossible. And a thousand other things, equally absurd.

And all this, not to protect animals from pain—since animal experimentation is prohibited even when there is no pain, while the infliction of pain is permitted, if it is for other purposes—but to prevent scientific investigation.

The thing is almost unthinkably preposterous. No such law exists or has ever been seriously proposed in any civilized country. And yet there will be a real crusade for it, by people who think they are sincere, in California.—Chester Rowell, in S. F. Bulletin.

NEW MEDICAL JOURNAL

A new medical Journal, known as the "American Medical Press," a monthly medical publication, came off the press in June. This Journal emphasizes the importance of medical economics and the duty of the physician as a citizen. Dr. F. H. McMechan is editor; Harvey S. Knox, business manager. The Journal is published by the New York Press, 280 Broadway, New York City.

Thank You—Dear Doctor Musgrave: Just a note to congratulate you upon having accomplished the Herculean task of shortening the papers in the California State Joournal. I think it must increase the interest in the Journal, and it will enable many more to be heard when they want a hearing. I noticed a while back one of the Canadian Journals has a large number of articles, all about a page and a half long.—Walter C. Alvarez

STATE SOCIETY

CODIFICATION OF THE CONSTITUTION AND BY-LAWS OF THE CALIFORNIA MEDICAL ASSOCIATION

In compliance with the Constitution and By-Laws and with the resolution of the House of Delegates, the following report of the Committee on Codification of the Constitution and By-Laws is published. The second notice required by the Constitution will be published later in the year.

It is recommended that members read this proposed codification in connection with the existing Constitution and By-Laws and make any desired suggestions to the Secretary for transmission to the Council.

CONSTITUTION

ARTICLE I
Name and Object

Section 1. The name of this Association shall be the "California Medical Association."

Sec. 2. The purpose of this Association shall be to federate and bring into one compact organization the entire medical profession of California, and to unite with similar societies of other states to form the American Medical Association and such regional associations as the House of Delegates may deem advisable; to extend medical knowledge and advance medical science; to elevate the standard of medical education and practice, and to secure the enactment and enforcement of just medical laws; to promote friendly intercourse among physicians; to guard and foster the interests of its members and to protect them against imposition; and to enlighten and direct public opinion in regard to the great problems of medicine and public health, so that the profession may become more capable and honorary within itself, and more useful to the public, in the prevention and cure of disease, and in the prolonging and adding comfort to life. This Association as a constituent unit of the American Medical Association hereby recognizes and pledges its support to the Constitution and By-Laws of the American Medical Association and rulings by competent authority thereof.

ARTICLE II
Component Societies

Component societies shall consist of those county, district and other constituent societies which hold charters from this Association and whose Constitution and By-Laws, rulings, activities and procedure are not in conflict with the Constitution and By-Laws and decisions of competent authority of this Association.

ARTICLE III
Members

Section 1. Members—The members of the Association shall be the members of the component district, county and other constituent medical societies and associate members of this Association as provided in Section 2 hereof.

Sec. 2. Associate Members—Associate members shall be elected from those persons who by education, training and experience in sciences so closely allied to medicine as to make their affiliation with this Association desirable in the opinion of the Council. They shall be elected by the Council. Associate members shall pay such annual dues and enjoy such rights and privileges as the Council shall from time to time prescribe.

Sec. 3. Inactive Members—Inactive members shall be elected from those doctors of medicine eligible for active membership, but who are for any reason satisfactory to the Council of the constitutent society and the Council of the State Association, entitled to special consideration. These members shall have all the rights and privileges of other members, except medical defense, and shall pay nominal dues of one dollar a year to the constituent society and one dollar a year to the State Association.

Sec. 4. Persons eligible for membership and inactive membership under the provisions of this Constitution are not eligible for any other type of membership either in the constitutent or State society. Honorary membership is limited to and in addition to active or inactive membership in State and constituent societies.

Sec. 5. Guests—Any person may become a guest during any annual meeting, on invitation extended by the Secretary with the approval of the Council or the Executive Committee. Guests shall be accorded the privilege of participating in all of the scientific work for that meeting.

ARTICLE IV
House of Delegates

The House of Delegates shall be the legislative body of the Association, and shall consist of (1) Delegates elected by the county, district and other component societies, (2) the Councilors, and (3) ex-officio, the President, President-elect, Vice-President and Secretary of this Association.

ARTICLE V
Meetings

Section 1. The regular meetings of this Association shall he held annually at such times and place as the Council shall fix; and notice thereof shall be published in the Journal of this Association in at least two regular issues preceding such regular meeting.

Sec. 2. Special meetings of the House of Delegates may be convened as the By-Laws provide. Twenty-five members shall constitute a quorum in the House of Delegates.

ARTICLE VI
Officers

Section 1. The officers of this Association shall be a President, a President-elect, a Vice-President, a Secretary, and fifteen Councilors, of whom one shall he elected from each of the nine Councilor districts and six at large, two of whom shall be elected from the County of Los Angeles, and four from the remainder of the State. Not more than three Councilors shall be elected from any one Councilor district. These officers shall be elected by the House of Delegates at the time and in the manner provided in this Constitution and the By-Laws.

Sec. 2. The officers, except the Councilors, shall be elected annually. The terms of the elected Councilors shall be for three years.

Sec. 3. The Association shall elect a President for the next succeeding year who shall remain President elect for one year preceding his assumption of the office of President. While President-elect he shall be ex-officio a member of the Council and of all other bodies and committees of which the President is an ex-officio member.

Sec. 4. No delegate shall be eligihle to any office named in the preceding section, except that of Councilor, and no person shall be elected to any such office who has not been a member of the Association for two years next preceding his election.

ARTICLE VII
Council

The Council shall consist of the elected Councilors and the President, the President-elect, the Vice-President and the Secretary, ex-officio. Besides its duties mentioned in the By-Laws, it shall constitute the Finance Committee of the House of Delegates. Five Councilors shall constitute a quorum.

ARTICLE VIII
Section and District Societies

The Council shall provide for a division of the work of the Association into appropriate sections, and shall assist in the organization of such district societies as will promote the best interests of the profession, such societies to be composed exclusively of members of component county or other constituent district societies.

ARTICLE IX
Funds and Expenses

Funds shall be raised by equal per capita assessments upon the active members of each component society. The amount of assessments shall be fixed by the House of Delegates by a two-thirds vote thereof of those present. The fiscal year of the society shall he from January 1 to December 31. The number of members in good standing in each component society on the first day of March of each year shall be taken as the basis for the assessment for that fiscal year.

ARTICLE X
Referendum

The House of Delegates, in regular or special session assembled, or the Council, may by a two-thirds vote submit any question in such form as either of said bodies approve, to all of the members of the Association by mail, and a majority of the vote so cast by mail by the members of this Association shall bind the Association and all constituent societies thereof upon the question presented.

ARTICLE XI
The Seal

The Association shall have a common seal, with such inscription thereon as the Council shall prescribe.

ARTICLE XII
Amendments

The House of Delegates may amend any article of this Constitution hy a two-thirds vote of the delegates present at any annual meeting, provided that such amendment shall have been presented in open meeting at the previous annual meeting, and that it shall have been published twice during the year in the Journal of this Association, or sent officially to each component society for at least two months before the meeting at which final action is to be taken.

BY-LAWS

ARTICLE I
Membership

Section 1. All members of county and other constituent societies, except associate or honorary members, shall by virtue of such membership, be members of this Associaton upon certification by the Secretary of the component society of such membership and the receipt of the assessment for the fiscal year.

Sec. 2. Any person who is under sentence of suspension or expulsion from a component society, or whose name has been dropped from its roll of members, shall not be entitled to any of the rights or benefits of this Association, nor shall he be permitted to take part in any of its proceedings, nor receive its publications, until he has been relieved of such disability.

Sec. 3. It shall be the duty of the Secretary of each component society to furnish the Secretary of this Association before the first day of March of each year a list by names and addresses of all members in good standing on the first day of January of each year, and

to notify the State Secretary monthly of all changes in membership of the constitutent society, with corresponding change of address.

Sec. 4. Any physician residing in a county in which there is no county or other constituent society may make application for membership to the county or other constituent society nearest to the county in which he resides, or which he can most conveniently attend.

ARTICLE II
Meetings

Section 1. The annual meeting of this Association shall be held at such time and place as the Council shall appoint.

Sec. 2. Special meetings of the House of Delegates may be called by the President upon request so to do by a majority vote of the Council, and shall be called by him upon the written request of at least twenty delegates, provided that each delegate is notified as to time, place and object of the proposed meeting, by written notice, given at least ten days prior thereto.

Sec. 3. General Sessions, Sessions of the House of Delegates and Section Meetings—the time for the convening of each thereof, the number of meetings, duration and place thereof, shall be fixed by the chairman of the committee on scientific program, with the approval of the Council.

Sec. 4. The Association in general session assembled may instruct the House of Delegates to appoint committees or instruct officers in any matter of special interest and importance to the profession and to the public.

ARTICLE III
House of Delegates

Section 1. The House of Delegates shall be the legislative body of the Association, and shall consist of the officers of the society and delegates representing each component society.

Sec. 2. Each component society shall be entitled to send to the House of Delegates each year one delegate and one corresponding alternate for every fifty members, and one for each major fraction thereof, provided that each component county or other constituent society which has made its annual report and paid its assessment, as provided in this Constitution and By-Laws, shall be entitled to one delegate and one alternate.

Sec. 3. Twenty-five delegates shall constitute a quorum.

Sec. 4. Delegates and alternates shall be elected for a term of two years, and those societies entitled to more than one representative shall arrange such election so that one-half of their delegates and alternates, as near as may be, shall be elected each year.

Sec. 5. The House of Delegates or the Council shall approve all memorials and resolutions of whatever character issued in the name of the Association before the same shall become effective.

Sec. 6. The sessions of the House of Delegates shall be open to all members of the Association.

Sec. 7. The House of Delegates shall have authority to appoint committees for special purposes from among members of the Association who are not members of it. Such committees shall report to the House of Delegates, and may be present and participate in the debate on their reports.

Sec. 8. The House of Delegates shall elect representatives to the House of Delegates of the American Medical Association in accordance with the Constitution and By-Laws of that body.

ARTICLE IV
Duties of Officers

Section 1. The President shall preside at the meetings of the Association and of the House of Delegates; he shall appoint all committees not otherwise provided for; and perform such other duties as custom and parliamentary usage may require.

Sec. 2. The Vice-President shall assist the President in the discharge of his duties and act for him in his absence.

Sec. 3. The Secretary shall attend the general meetings of the Association; the meetings of the House of Delegates and of the Council, and shall keep the minutes of their respective proceedings. He shall be ex-officio Secretary of the Council. He shall be custodian of all records, books and papers belonging to the Association, and shall keep account of and promptly turn over to the depositary all funds of the Association which come into his hands. He shall provide for the registration of the members and delegates at the annual meetings. He shall, with the co-operation of the secretaries of the component societies, keep an approved register of all the members of the Association by counties, noting on each his status in relation to his county or other constitutent society. He shall aid the Councilors in the organization and improvement of the county and other constituent societies and in the extension of the usefulness of this Association. He shall conduct the official correspondence, notifying members of meeting, officers of their election, and committees of their appointment and duties. He shall employ such assistants as may be ordered by the Council, and shall make an annual report to the House of Delegates. He shall supply each component society with the necessary blanks for making its annual report; he shall keep an account with the component societies, charging against each society its assessment, collect the same and promptly turn it over to the depositary. He shall in like manner keep an account with each member as to any assessment or assessments levied directly upon each member, collect the same and promptly turn it over to the depositary. As chairman of the committee on scientific program, he shall prepare and issue all programs. He shall perform such other duties as the Council shall direct. The amount of his salary shall be fixed by the Council.

Sec. 4. The depositary of the Association shall be a bank or trust company to be selected by the Council. All funds received for the Association by any officer or agent thereof shall be promptly deposited with the depositary. The depositary shall pay out the money of the Association only upon a check or draft signed by the Secretary and countersigned by the chairman or other designated member of the Council. The Secretary shall issue such checks or drafts only upon vouchers approved by the Auditing Committee and signed by all the members thereof. A revolving fund in such amount as may from time to time be fixed by the Council shall be left with the Secretary, from which fund immediate cash demands shall be paid.

ARTICLE V
Council

Section 1. The Council shall meet on the day preceding the annual meeting and daily during its sessions, and it shall also hold at least three other meetings during the year, at least one of which shall be held in the southern part of the State. Special meetings may be called by the chairman at any time, and he shall call a special meeting upon the written request of at least three councilors, provided written notice for not less than three days of the time, place and object of the proposed special meeting be given by the secretary. At the meeting held on the last day of the annual meeting of the Association the Council shall reorganize and shall elect a chairman for the ensuing year. Its chairman shall make an annual report to the House of Delegates of its proceedings.

Sec. 2. The Council shall have power to invest the funds of the Association, and to do and perform all acts and transact all business for and on behalf of the Association when the House of Delegates is not in session. It shall also have power to delegate such powers and duties as it may determine to the Executive Committee hereinafter provided for.

Sec. 3. In the event of a vacancy in the Council, or in the office of the Secretary, or in any elective or other office not otherwise provided for, the Council shall fill the vacancy until the next annual election or other regular selection, as provided for in the Constitution and By-Laws.

Sec. 4. The Council shall provide for the publication and distribution of a periodical to be known as the "Journal of the California Medical Association," or some similar title to be determined by the Council, and such other publications as may be necessary, and shall have authority to employ at such salary as it may deem proper, an editor, who shall be responsible to the Council, and who shall properly edit and conduct the offcial journal and such other publications as may be authorized by the House of Delegates or the Council.

Sec. 5. The Council shall secure the services of competent public accountants and cause them to audit the accounts of all officers, committees and agents of the Association at least once a year, and shall present such report to the House of Delegates.

Sec. 6. The Council shall divide the State into Councilor districts, according to the number of districts fixed by Article VI, Secton 1, of the Constitution, specifying what counties each district shall include. Whenever the number of delegates, as provided in Article III, Section 2, exceeds one hundred, it shall make a reapportionment that shall bring the number of delegates within this limit, after carefully examining the membership list of component societies to determine therefrom the number of delegates in excess of the one delegate to which each county or other constituent society shall be entitled. Such reapportionment shall take place at the annual meeting next succeeding that at which the reapportionment is approved by the House of Delegates.

Sec. 7. The Council shall, upon application, issue charters to county or other constituent societies organized to conform to the letter and spirit of the Constitution and By-Laws, rulings and regulations of this society, and such county or other constituent society shall not amend or change the same, contrary thereto. The Council shall, upon application, issue similar charters to other societies of physicians, otherwise qualified to become members of a county society and of this Association, where by reason of geographical or other conditions county organizations are not feasible or calculated to promote the best interests of the profession or of the public. Said district or constituent societies shall in like manner be organized to conform to the letter and spirit of the Constitution and By-Laws, rulings and regulations of this society, and such constituent societies shall not change or amend the same contrary thereto.

Sec. 8. The Council, when the best interest of the Association and profession will be promoted thereby, shall organize district medical societies, and all members of the component county societies, and no others, shall be members in such district societies.

Sec. 9. The Council may promote and cause to be organized societies of medical or premedical students in any approved teaching institution in this State, with such affiliation with this Association and under such control as it shall deem advisable and proper.

Sec. 10. The Secretary, with the written authoriza-

tion of the chairman, may submit any urgent question to the Council by mail ballot.

Sec. 11. The chairman shall annually appoint a committee of two who shall audit the accounts of the Association at least once every month, and who shall have general supervision of all the finances of the Association. Said Auditing Committee shall elect a chairman.

Sec. 12. The Council shall appoint an attorney-at-law in good standing, practicing his profession at San Francisco, to act as general attorney for the Association, and an assistant general attorney practicing his profession at Los Angeles to act as assistant general attorney. The general attorney shall, so far as possible, attend the sessions of the Council and of the House of Delegates and shall generally advise and counsel with the councilors and officers of the Association. The general attorney and assistant general attorney shall have charge of all actions for malpractice against individual members of the Association on behalf of such members whenever their defense is authorized by the Associaton, through the Council, the Executive Committee or the Secretary thereof.

Sec. 13. In all matters not otherwise provided for in this Constitution and By-Laws, the Council shall be the judicial, legislative and policy-making body of this Association. All questions of more than local importance whether involving interpretation of ethics, definition of policy, decision in controversy, financial, organizational or other matter not provided for by this Constitution and By-Laws shall be referred to the Council for action, and this action shall be binding upon the Association and its constituent member societies, provided that the action by the Council is subject to review by the House of Delegates or by the general referendum.

Sec. 14. The Executive Committee shall consist of the President, the President-elect, the Vice-President of the Association, the chairman of the Council, the chairman of the Auditing Committee, the Secretary, the editor and the general attorney. The committee shall elect its own chairman, and the Secretary shall act as secretary thereof. It shall keep a record of its proceedings and report them to the Council. It shall initiate action, investigate or take charge of all matters in which the welfare and the best interests of the public and the Association are mutually concerned. It shall act in the place of the Council when the later is not in session, all of its steps and proceedings, however, to be subject to the approval of the Council.

ARTICLE VI

Order of Procedure

The Program Committee shall consist of the Secretary of the Association and four members of the Association who shall be elected by the House of Delegates, one each year to serve for four years. The Secretary of the Association shall he the chairman thereof. It shall determine the character and scope of the scientific proceedings of the Association, subject to the instructions of the Council, and shall provide for and fix the order of business at the sessions of the general meeting, the sessions of the House of Delegates and the sessions of each section.

ARTICLE VII

County Societies

Section 1. Each county and other constituent society of this Association, which has adopted principles of organizaiton not in conflict with the Constitution and By-Laws, rulings and procedures of this Association, shall, on applicaton, receive a charter from and become a component part of this Association. Such charters shall provide that the Constitution and By-Laws and procedures of the constituent member society shall not be amended in any way which might conflict with the Constitution and By-Laws of the American Medical Association and of this Association as originally drawn or as modified by competent authority, except by and with the written approval of the Council of this Association.

Sec. 2. Charters shall be issued only upon approval of the Council or House of Delegates, and shall be signed by the President and Secretary of this Association. The Council or the House of Delegates shall have authority to revoke the charter of any county or other constituent society whose actions are in conflict with the letter or spirit of the Constitution and By-Laws, policies and procedures of this Association.

Sec. 3. Only one component medical society shall be chartered in any one county, provided that the physicians in a portion of any one county who can show adequate reasons satisfactory to the Council therefor may be authorized to join a constituent district society as elsewhere provided for in this Constitution and By-Laws.

Sec. 4. Each county or other constituent society shall judge the qualifications of its own members. However, as such societies are integral parts of this Association and the basis of membership in the American Medical Association, it is necessary that the qualifications meet the minimum requirements of the State and national organizations. These minimum requirements are that to be eligible for election as an active or inactive member the applicant must hold the degree of doctor of medicine from an accredited medical school for active membership and must be licensed to practice medicine and surgery in the State of California. He must not practice or claim to practice or lend his support, co-operation or in any other way endorse any exclusive system of medicine or any person practicing the same. He shall be honorable and ethical in his conduct and shall subscribe to the principles of medical ethics of the American Medical Association, and shall recognize the Council of this Associaton as the proper authority to interpret any doubtful points about ethics. Every applicant for membership in a component society shall fill out and sign in duplicate the application blanks provided by the Society which prescribe the necessary qualifications for membership. One copy of each such application shall be promptly forwarded to the office of the State Secretary.

Sec. 5. Any physician who may feel aggrieved by the action of the society of his county in refusing him membership, or in suspending or expelling him, shall have the right to appeal to the Council within three months, and if the decision of the Council be questioned, an appeal may be taken to the House of Delegates, whose decision in any case shall be final.

Sec. 6. In hearing appeals the Council may admit oral or written evidence as in its judgment will best and most fairly present the facts, but in case of every appeal, both as a board and as individual councilors in district and county work, efforts at conciliation and compromise shall precede all such hearings.

Sec. 7. When a member in good standing in a component society moves to another county or other jurisdiction in this State, his name, on request, shall be transferred, without cost, but upon assuming such financial obligation as shall be deemed proper by the component society to which transferred.

Sec. 8. A physician living on or near a county line may hold his membership in that county most convenient for him to attend, provided that the consent of the society of the county in which such physician may reside be first obtained, and also the consent of the society which he desires to join.

Sec. 9. The Secretary of each component society shall keep a roster of its members and of the non-affiliated registered physicians of the county, on which shall be shown the full name, address, school and date of graduation, date of license to practice in this State, and such other information as may be deemed necessary. In keeping such roster the Secretary shall note and at once notify the State Secretary of any changes in the personnel of the profession, by death or by removal to or from the county, and in making his annual report he shall be certain to account for every physician who has lived in the county during the year. The Secretary of each component society shall make a monthly report to the Secretary of the Association upon forms and including such subjects as the Council shall authorize.

Sec. 10. The Secretary of each component society shall forwarded its assessments, together with its roster of officers and members, list of delegates and alternates and list of non-affiliated physicians of the county to the Secretary of this Association before the first day of March of each year. Only those delegates and alternates who are duly elected and certified to the State Secretary before March 1 shall have the right to represent their society in the House of Delegates.

Sec. 11. Any county society which fails to pay its assessment or make the report required on or before March 1 shall be held as suspended, and none of its members, delegates or alternates shall be permitted to participate in anv of the business or proceedings of the Association or of the House of Delegates during the annual session of that year, nor thereafter, until all requirements for membersip have been met.

Sec. 12. No member of a component society shall be deprived of his membership unless by his own act, except by a three-fourths affirmative vote of all the members present at a regular meeting, and after an opportunity has been given for the accused to be heard in his own defense; but a member shall be dropped on the revocation of his certificate by the Board of Medical Examiners of California.

Sec. 13. When a member shall resign his membership in a component society, he shall thereby forfeit all right and title to any share in the privileges and property of the California Medical Association.

Sec. 14. Any county or other constituent society may, in its discretion, create associate members from persons engaged professionally in branches of science allied to medicine but not holding the degree of doctor of medicine. Associate and honorary members of any county or other constituent society are not members of this Association. However, when the constituent society follows the provisions of the State Association in its inactive and associate membership provisions, such associate or inactive members of constituent societies may be elected to corresponding position in the State Association membership by the Council.

ARTICLE VIII

Miscellaneous

Section 1. The principles of medical ethics of the American Medical Association are adopted as the ethics of this Association and are made part of the charter provisions for constituent societies. Interpretation of points in ethics about which there may be any controversy shall be submitted to the Council of the State Association for ruling, and this ruling shall be final and authoritative, provided the House of Delegates by vote may ratify the action of the Council.

Sec. 2. New members who join a component society

after July 1 shall pay only one-half the regular annual assessment for such fiscal year.

Sec. 3. The deliberations of this Association shall be governed by parliamentary usage as contained in Robert's Rules of Order, when not in conflict with this Constitution and By-Laws.

ARTICLE IX

Amendment to By-Laws

Section 1. The House of Delegates is authorized to amend any article or section of the By-Laws by a three-fourths affirmative vote of the delegates present; provided, that such amendment has been submitted in writing and laid on the table for twenty-four hours previous to being voted upon.

Sec. 2. The Constitution and By-Laws heretofore governing this Association are hereby repealed, and this Constitution and By-Laws shall be in full force and effect immediately after it is declared duly adopted.

An Efficient and Inexpensive Device for Cutting Bandage Rolls—The Travers Surgical Company have perfected a simple device which enables one to cut bandages any desired size with edges clean and even. As a time saver it is of much value. There are no threads clinging to the bandages. This device is very compact and portable, as it weighs but a few pounds. The use of this bandage cutter eliminates the necessity of carrying a large stock of bandages of assorted sizes, thereby creating a big saving, as the difference in cost of the yard bandage roll and ready-cut bandages is considerable. The many advantages of the Klean Edge Bandage Cutter can be readily seen.

Troy Laundry Machinery Company Move Their Factories—The Troy Laundry Machinery Factories have been moved from Chicago to East Moline, Ill. All of the manufacturing departments of this great company are now in operation in one center. The factories cover eighty-three acres consisting of fourteen buildings grouped around an administration building and a factory office. Hospitals interested in laundry machinery make no mistake with dealing with the Troy Laundry Machinery Company.

COUNTY NEWS

ALAMEDA COUNTY

Alameda County Medical Society (reported by C. L. McVey, secretary)—The Society met on August 21; E. E. Brinckerhoff, president; C. L. McVey, secretary. The scientific program consisted in a discussion of brain injuries. Howard Naffziger of San Francisco presented the subject as (a) clinical classification of brain injuries according to pathological findings; (b) description of a new group of cases amenable to surgical treatment; (c) the interpretation of pressure signs and the indications for surgical treatment. O. D. Hamlin, J. H. Buteau, C. A. Dukes and M. L. Emerson took part in the discussion. The revised constitution and by-laws were adopted.

BUTTE COUNTY

Enloe Hospital Temporarily Closed—It is reported that the three head nurses of Enloe Hospital left the institution suddenly. As a result of this action, it has been necessary to close the hospital for all but emergency work for a period of ten days or two weeks. The physicians of the community are co-operating to keep the hospital operating until a new staff of nurses can be secured. The nurses who resigned are: Miss Margaret Brown, Miss Adalaine Wildman and Miss Marie Joachims.

GLENN COUNTY

Willows Sanitarium—This hospital, owned by Etta Lund, M. D., has just issued an annual report. During the year 105 operations were performed and a large number of all classes of medical cases were treated. The hospital is equipped with Brahamhall-Deane sterilizer and has other facilities for doing safe work.

KERN COUNTY

Alice Cooper Memorial Hospital—Mr. Chester Conklin is constructing a sanitarium, particularly for patients suffering from tuberculosis, on his four hundred acre ranch located in the Horseshoe Valley of the Mojave Desert about one hundred miles from Los Angeles. Mr. Conklin is spending a considerable amount of money to make this sanitarium attractive and has secured the services of Doctor John T. Bernard as medical director.

LOS ANGELES COUNTY

William Day Moore, M. D., Health Officer of San Pedro, has resigned in order to give his entire time to his private practice.

MARIN COUNTY

Marin County Medical Society (reported by C. A. DeLancey, secretary)—The Society held a business meeting on the last Thursday of July, the principal subject being the Fee Schedule as adopted by the Council.

Dr. C. A. DeLancey has resigned from the State Prison at San Quentin, where he has held the position of assistant physician, in order to go into private practice in San Anselmo. Dr. Northrop succeeds Dr. DeLancey at the prison.

Presbyterian Orphanage at San Anselmo—The Presbyterian Orphanage at San Anselmo, which was burned to the ground several months ago, is being rapidly reorganized. The new organization will consist of cottage units. Dr. Blatry, the superintendent, expects that three of these cottages will be ready for occupancy before December. Medical attention is rendered gratis by the physicians of the County.

SAN DIEGO COUNTY

Meeting of Council of San Diego County Medical Society (reported by Geo. B. Worthington, secretary)—Applications of Drs. Chas. E. Howard and W. A. Alton for membership by transfer were considered by the council, and on motion these applicants were elected to membership.

The industrial medicine blanks received from thirty-two physicians were presented to the Council for approval. On motion the secretary was instructed to forward the completed blanks to the State secretary with a clause relative to the Society's opinion as to individual competency in the different lines of work unsigned, and further instructed the secretary to notify the State secretary that while the Society felt competent to certify as to the individual's standing and membership in the County unit, it considered it impracticable to definitely certify as to competence in any indicated subject.—Bulletin of San Diego County Medical Society, July 21, 1922.

Early Days of the San Diego County Medical Society—There seems to be evidence that an attempt was made in 1880 and again in 1886 to start a San Diego County Medical Society, but both seem to have run a short course owing to jealousies existing among the physicians of those days. The present County Medical Society was started at a meeting held early in 1887.—Fred and Charlotte Baker, in the Bulletin of the San Diego County Medical Society, July 21, 1922.

Elwyn Sanitarium—W. D. Rolph, M. D., has associated himself with Dr. E. S. Coburn of National City in the conduct of the Elwyn Sanitarium, which will continue to be operated as an open staff general hospital.—The Bulletin, San Diego County Medical Society, July 21, 1922.

SAN FRANCISCO COUNTY

New Director Bureau of Hygiene, California Board of Health—Dr. Ellen S. Stadmuller of this city has been appointed director of the State Bureau of Hygiene to fill the vacancy left by the resignation of Dr. Ethel M. Watters. Dr. Stadmuller is a graduate of the University of California Medical School, and has practiced medicine in San Francisco since 1912. The State Board of Health, coincident with accepting the resignation of Dr. Watters, accepted also that of Miss Mary K. Clary, a public health nurse. The action of the board was taken at the conclusion of a probe into alleged irregularities in the filing of expense claims by the two women, whose dismissal was recommended by the State Board of Control several weeks ago.—S. F. Examiner, July 3, 1922.

Medical Social Workers—The California Association of Medical Social Workers met at "tea" at one of the hotels August 4. Dr. Richard Cabot of Boston led a discussion on case work and case records—the social service exchange and pay clinics.

Academy of Medicine—The Academy of Medicine met at dinner on August 26, and was addressed by Richard Cabot, M. D., of Boston.

SAN MATEO COUNTY

Alexander Sanitarium—The Alexander Sanitarium, for the care of patients suffering from nervous and mental disorders, has recently completed a new and modern physiotherapy department at a cost of $18,000. This sanitarium, located twenty-two miles south of San Francisco, in the foothills near Belmont, California, and near the California Tuberculosis Sanitarium, accepts patients of any licensed physician and surgeon.

SANTA BARBARA COUNTY

Santa Barbara County Medical Society (reported by A. C. Soper, secretary)—The July meeting was held in the Cottage Hospital on July 10 with thirteen members and three guests present. Walter M. Dickie, M. D., secretary of the State Board of Health, presented a paper with graphic charts showing mortality and morbidity rates of the State with particular reference to contagious diseases dating from 1906, when the first fairly accurate records began to be made. Discussion was entered into by members present. Lloyd Mills, M. D., of Los Angeles, read a paper on "Modern Cataract Surgery," discussed by G. W. Jean and L. R. [illegible]. Jesse P. Truax, of Lompoc, was elected to membership. The secretary reported correspondence with Drs. Dickie and Mills, Edwin I. Bartlett, and the League for the Conservation of Public Health. Application cards to the League were signed by H. F. Pierce, O. C. Jones, and G. W. Jean. Censors were reminded that it will be their duty to pass on the questionnaires for industrial medicine practice.

Santa Maria Hospital Plans Progressing—It is reported that earnest work is being carried forward looking to the building and maintenance of a hospital in Santa Maria. Among those interested in this important problem are: Dr. Coblenz, Dr. Brown, Mrs. H. E. Easton, Mrs. George Scott, E. D. Rubel, A. McNeill, L. P. Scaroni.

Improvements in Orcutt Hospital—It is reported that Dr. C. D. Dickey has provided extensive improvements in the Orcutt Hospital. It is reported that this hospital is owned by Drs. French and Early, of Los Angeles.

SANTA CLARA COUNTY

Santa Clara Medical Society (reported by E. P. Cook, secretary)—The regular meeting of the Society was held July 19, 1922, at the Oaks Sanitarium, Los Gatos, with an attendance of twenty-five members. Robert P. Gober and Paul C. Alexander were elected to membership. The scientific meeting was conducted by Dr. Voorsanger, who discussed recent advances in the treatment of tuberculosis. Heliotherapy and the method of performing artificial pneumothorax were demonstrated. C. M. Richards read a paper on the X-ray diagnosis of pulmonary tuberculosis, stressing the importance of the Roentgenologist as a medical consultant. Appreciation was voiced of Doctor Voorsanger's hospitality. Refreshments were served after the adjournment of the meeting.

STANISLAUS COUNTY

Oakdale Hospital Bond Issue Fails to Carry—The proposition to vote $35,000 for bonds to erect a municipal hospital in Oakdale was defeated by a vote of 141 to 76.

TUOLUMNE COUNTY

Tuolumne County Medical Society (reported by W. L. Hood, secretary)—The May meeting of the Tuolumne County Medical Society was a public meeting held in the opera house. Dr. Hirshfelder of Belmont Sanitarium addressed the meeting. The important public health problem of "campers along the streams" in Tuolumne County was considered by the Society. The Society went on record as being in favor of more and better paid health officers.

Hospital Facilities of Tuolumne County—Hospital facilities for the people of Tuolumne County are: County Hospital at Sonora, sixty beds for male patients and twenty for females; Bromley Sanitarium at Sonora, private sanitarium of ten beds, owned by R. I. Bromley, M. D., and open to all physicians; Sierra Hospital, twenty-four beds, owned by E. T. Gould, M. D., at Sonora; Tuolumne Hospital, fifteen beds, owned by E. H. Reid, and located at Tuolumne.

Hetch-Hetchy Hospital Destroyed by Fire—The hospital used for the care of employes on the Hetch-Hetchy water supply proposition for San Francisco was destroyed by fire recently. There were twenty-nine patients in the hospital at the time, and only by heroic work were their lives saved. Nurse Ethel Moyer lost her life as a result of burns received while moving patients from the

hospital. After removing the last patient, Mrs. Moyer, with her clothing afire, jumped from the second story of the hospital and suffered a broken back. A movement is under way to commemorate the sacrifice made by Mrs. Moyer by the erection of the Ethel Moyer Memorial Hospital on the ground previously occupied by the hospital that was burned.

YOLO COUNTY

Yolo County Medical Society (reported by Lela J. Beebe, secretary)—The quarterly meeting of the Society was held in the County Court House, Woodland, June 20. Present: Bates, Beebe, Blevins, F. R. Fairchild, King, Keith, Lawhead, Lawson, Newton, and Ward. Absent: Craig, Desrosier, C. H. Fairchild, Goffin, McManus, Parsons, and Poage. H. D. Lawhead made a delegate's report on the 1922 State Medical Society meeting. Charles Keith presented a paper on the diagnosis and medical aspects of cholecystitis. F. R. Fairchild discussed the diagnosis and surgical aspects of cholecystitis. The papers were followed by a general discussion participated in by all members present. The secretary was instructed to write to President-elect Thomas Clay Edwards, a former Yolo County man, conveying to him the congratulations of this society on the signal honor conferred upon him.

The Higher Education of Chiropractors—What is your favorite light literature? Detective stories? Mystery stories? Humor? Have you ever read the publications issued by the various species and subspecies of the chiropractic cult—for there is, as you know, a lack of unanimity among the chiropractors. One particularly choice piece of contemporary journalism is issued by a chiropractor factory in Fort Wayne, Indiana. Its July (1922) issue makes good hot weather reading. The editor discusses a "model bill," recently drawn up by those chiropractors of Indiana who belong to a different subspecies from those represented by the publication in question. This Fort Wayne journal views the bill with disfavor. It says, with refreshing naivete:

"To begin with there is absolutely no need of a chiropractic licensing and examining board in Indiana today. The existing lot of chiropractors in Iniana cannot be improved upon. You are not being persecuted or prosecuted, you are left severely and strictly alone to practice your profession without any let or hindrance from any source or any group of any kind. In fact, Indiana today is the best chiropractic state in the entire country. Chiropractic conditions are as near ideal as it is humanly possible to approach that condition."

But the fact that Indiana is the home of the free, chiropractically speaking, is not the only objection this journal has to the proposed bill. It seems that the bill would require applicants for chiropractic examinations to submit satisfactory proof of the possession of a preliminary education, equal to that of a high school. Perish the thought! As the editor says:

"How many chiropractors in Indiana today could qualify under that rule? Of all the chiropractors in Fort Wayne, I do not happen to know one that is a high school graduate. In fact, I believe that the total number in Indiana able to comply with that ruling would be less than two per cent of all the chiropractors in the state."

From the point of view of the owner of a chiropractic "college" the sentiments just quoted are eminently logical. It would be entirely unfair to chiropractic schools to insist on matriculants being educated human beings. What educated human being would ever attend a chiropractic school? Of course, from the point of view of public interest—but that's another story.—Journal of A. M. A., July 15, 1922.

BUSINESS AND THE BUSY PHYSICIAN

Why not let our advertisers help you?

Banking and Investments—It is one thing to have a large gross income. It is quite another matter to convert a large percentage of this income into net profits. The most difficult of all business ventures is to make money make money within the bounds of reasonable safety for the original investment.

The fixed charges or "overhead" expenses of physicians are, as a rule, higher in proportion to volume of income than for any other class of citizens. With social conditions as they are, the factors that produce this extra burden will continue operative and consequently the net earned dollars of physicians are small in proportion to their incomes. Realization of these conditions should make physicians conservative and particularly careful as to the safety of their earnings and (particularly careful as to) their investments.

In order to be of as much assistance as possible to our members in business, as well as in professional affairs, the executive committee approves the policy of advertising safe banking and investment houses who are willing to give advice to physicians by personal visit or by correspondence. In this issue will be found the advertisements of three banks and trust companies. They are:

Union Trust Company, Market street and Grant avenue, San Francisco.

The San Francisco Savings and Loan Society, 526 California street, San Francisco.

Anglo-California Trust Company, Market and Sansome streets, San Francisco, with branches at Market, McAllister and Jones, Mission and Sixteenth, Fillmore and Geary, 101 Market, Third and Twentieth, and branch offices of the bond department at 210 Syndicate Bldg., Oakland, and 1112 Pacific Mutual Bldg., Los Angeles.

These are all reliable, conservative institutions which are ready not only to protect your funds but to give you in a personal, confidential way the expert advice regarding investments that they would expect you to give them regarding health.

A Relief From Office Worries—A fortunate few physicians have so complete an office organization as to enjoy relief from the annoying, yet nevertheless important, details of the business side of practice. However, to the greater number this is a problem.

Realizing the difficulty the majority are confronted with in this regard, two local business women, Gail Sheridan and Mary Downing, have organized a complete visiting secretarial and accounting service, whereby small offices as well as large ones may be maintained in a thorough, modern and efficient manner.

The bane of many a physician's existence is the collection of his accounts, and the service offered by Miss Sheridan and Miss Downing embraces a tactful and systematic method for the collection of accounts. In addition, the service embraces the skillful handling of correspondence and accounting, installation of accounting systems, keeping of checking accounts and bank balances in order, and the preparation of income tax returns.

The many years' experience of Miss Sheridan and Miss Downing in important executive and secretarial positions in San Francisco office organizations specially equip them for the handling of business requiring confidence and trust. Their program and credentials have had serious consideration by the officers of the Medical Society. Their announcement appears on page 42 of the

advertising section, and their plans and methods have the endorsement of the Journal.

Gas and Oxygen—Hospitals and physicians are interested in gas and oxygen exactly as they are interested in drugs, instruments or any other substance in the practice of medicine and public health. Legitimate interest concerns itself in any of these products essentially in quality, price, adequacy of supply and the ethics of marketing.

There are several sources of gas and oxygen in California. There are also several prices, some variation in qualities and quite a variation in the ethics of marketing.

The Journal with this issue carries an advertisement of the Western Nitrous Oxide Company, one of the latest firms to enter the market in California. As in all other advertisements, the Journal has considered carefully for several months the methods and policies of this company before accepting their advertisement. They have complied with all the requirements made by the State Society, and their copy appears in this issue.

Comments regarding the product of this company, as well as upon the general question of the supply of anesthetics for hospitals, will be welcomed by the Council of the Medical Society.

PACIFIC COAST ASSOCIATION OF ANESTHETISTS

Joint Session With the Section on Anesthesiology of the California State Medical Society, Yosemite Valley, May 15-16, 1922

Minutes First Scientific Session

George P. Waller, President of the Pacific Coast Association of Anesthetists, called the meeting to order for the first scientific program, May 16, in the Hotel Sentinel, Yosemite village.

After preliminary announcements by the chair concerning transportation and entertainment, F. H. McMechan, Honorary Secretary of the Pacific Coast and Secretary of the American Association of Anesthetists, was introduced as the guest of the Association and recognized leader among anesthetists. In a few well chosen words Dr. McMechan expressed his pleasure at being present and commended the progress made by the organization in so short a time. In token of his appreciation and as a memento from Mrs. McMechan and himself, he presented to the Association, through Eleanor Seymour and George P. Waller, a beautiful silver mounted gavel engraved with the names of the first president and secretary, to which succeeding ones shall be added. After acknowledging the gift of the general secretary the following program was presented:

1. Spasticity from Inflammation in Relation to Anesthesia. (President's address.) Dr. George P. Waller, Los Angeles. Discussed by Doctors Botsford, Palmer and Wilson.

2. Anesthesia and Its Relation to the Patient, from a Surgeon's Standpoint; Type of Anesthesia in Relation to Existing Pathology; Emoluments to the Anesthetist. Harlan Shoemaker, M. D., secretary Los Angeles County Medical Society. Discussed by Doctors Huggins, Botsford, Wilson, Seymour and McMechan.

3. Sacral Anesthesia—A New Method of Administration with Report of Use in Four Hundred Urologic and Gynecologic Cases. Albert J. Scholl, Jr., Mayo Clinic, Rochester, Minn. Discussion by Doctors Robert Day, Harlan Shoemaker, Mary Botsford and F. H. McMechan.

4. Suggestive Leads in Anesthesia. F. H. McMechan, M. D., secretary American Medical Editors' Association. Discussed by Doctors Waller and Crane.

Omitted because authors were detained Time as an Element of Safety in Anesthesia in Children. Mary T. Murphy, M. D., San Francisco.

The Heart in Surgery. E. E. Fisher, M. D., Salem, Oregon.

Executive Session.

After the completion of the scientific program, the president called the members to order for a brief business meeting.

A charter roll of sixty names was read and all having been duly passed upon by the executive board were unanimously elected to membership.

There followed the reading of the organization meeting during the session of the State Medical Society at Coronado Wednesday, May 12, 1921. Minutes adopted as read.

On behalf of the executive board the following resolutions were presented by the secretary and each adopted in turn:

Resolutions Adopted.

1. Be it resolved that the Pacific Coast Association of Anesthetists hereby extends its hearty appreciation of the splendid efforts of the State Board of Medical Examiners and their legal advisers in interesting themselves in protecting of the public health and welfare by limiting the administration of anesthetics to legally qualified physicians.

2. Be it resolved that the Pacific Coast Association of Anesthetists hereby extends its hearty appreciation of the splendid efforts of the League for the Conservation of Public Health, its officers and legal advisers in interesting themselves in the protecting of public health and welfare by limiting the administration of anesthetics to legally qualified physicians.

3. Whereas the safety of those coming to operation under anesthesia is a paramount issue in public health work, be it resolved that the Pacific Coast Association of Anesthetists hereby urges the Health Department of San Francisco to eliminate nursing anesthesia and the dangers attaching thereto, by introducing the administration of anesthetics by expert medical anesthetists in the San Francisco City and County Hospital and providing adequate funds for such purpose.

4. Resolved that Dr. F. H. McMechan be instructed to extend the greetings of the Pacific Coast Association of Anesthetists to the Canadian Association of Anesthetists at Winnipeg in June and to the joint meeting of the Interstate, Research and World's Congress in Columbus in October, 1922.

5. Resolved that Dr. Eleanor Seymour be instructed to extend the greetings of the Pacific Coast Association of Anesthetists to the joint meetings of the American Association of Anesthetists, Mid-Western, and the Anesthesia session of the American Medical Association in St. Louis the week of June 22, 1922.

6. Resolved that the Pacific Coast Association of Anesthetists, appreciating the influence of the International Congress of Medicine, on the advancement of anesthesia, hereby appoints Dr. Mary E. Botsford as official representative to the section on anesthesia, to convey its compliments and carry its scientific message to the London Meeting in 1923.

7. Whereas the protection of the patient be advancement of surgery and the development of hospital service demand the administration of anesthetics by qualified physicians, therefore be it resolved that the Pacific Coast Association of Anesthetists urges the American College of Surgeons through its members and hospital standardization to eliminate the nurse technician and to confine the administration of anesthetics exclusively to physicians.

The next order of business was the presentation

of the seal specially designed and artistically executed by Mrs. Neil C. Trew, wife of the incoming president of the Southern California Society of Anesthetists. After admiring inspection, the design was accepted and a rousing vote of thanks extended Mrs. Trew for her artistic creation. The motto suggested by Dr. McMechan, "Divinum est sedere dolorem"—"It is God-like to relieve pain," was also unanimously adopted.

Election of officers then followed and the ticket as proposed by the nomination committee was unanimously endorsed, as follows:

Officers Elected.

George P. Waller, M. D., Los Angeles, Cal., president; Mary E. Botsford, M. D., San Francisco, Cal., vice-president; Eleanor Seymour, M. D., Los Angeles, Cal., secretary-treasurer; Walter R. Crane, M. D., Los Angeles, Cal., executive board, 1924; David E. Hoag, M. D., Pueblo, Colo., executive board, 1924; M. J. Rand, Elko, Nev., executive board, 1925; Robert L. Charles, M. D., Denver, Colo., executive board, 1923; Caroline B. Palmer, M. D., San Francisco, Cal., executive board, 1925; Louise A. Oldenbourg, M. D., Oakland, Cal., executive board, 1923.

It was moved, seconded and carried that a cordial invitation be extended to the American Medical Association and its session on Anesthesia, and to the American Association of Anesthetists to hold a joint session with the Pacific Coast Association of Anesthetists in San Francisco in June, 1923. Adjourned.

Scientific Program Continued.

May 16

1. Ethyl Chloride as a General Anesthetic. Louise A. Oldenbourg, M. D., Oakland. Discussed by Doctors Walker, Botsford and Crane.

2. Physiological Effects of Nitrous Oxide. Neil C. Trew, M. D. Discussed by Doctors Botsford, Bunnell and Crane.

3. Symposium on Intratracheal Anesthesia. Mary Kavanagh, M. D., and Edith Williams, M. D. (The latter read by Dr. Botsford.) Demonstration of apparatus and general discussion.

Omitted.

Anesthol, a Most Useful Anesthetic Mixture. Louis H. Maxson, M. D., Seattle, Washington. (Unable to be present.)

Nitrous Oxide Anesthesia in Infants. Mary E. Botsford, M. D., San Francisco. (Points Previously covered in discussion.)

At the close of the program and before adjourning, Dr. McMechan exhibited photos of the cups to be presented to James T. Gwathmey and Isabella Herb for distinguished work in the specialty of anesthesia. Dr. McMechan also extended congratulations on the success of the initial P. C. meeting and pledged the co-operation of all the regional organizations.

Dr. Botsford then moved a vote of sincere thanks for the inspirational visit of Dr. McMechan, general secretary, and for his extensive contributions to anesthesia literature, as the efficient editor of several publications. Adjourned to June 26, 1923. Eleanor Seymour, M. D., secretary.

American Roentgen-Ray Society—The annual meeting of this national association will be held in Los Angeles, September 12 to 17, under the presidency of Albert Soiland.

Many members of our State Society and others will be in Pasadena for the Hospital Convention to be held at the Maryland Hotel, September 5, 6, 7 and 8. Why not plan to spend an additional week in Los Angeles and attend the meetings of the American Roentgen-Ray Society? There is no more delightful place anywhere than Southern California in September.

Write to Dr. Soiland, 1407 S. Hope street, Los Angeles, and you will receive a cordial invitation to the meeting.

Pharmacology and Therapeutics

Edited by FELIX LENGFELD, Ph. D.

Help the propaganda for reform by prescribing official preparations. The committees of the U. S. P. and N. F. are chosen from the very best therapeutists, pharmacologists, pharmacognosists and pharmacists. The formulae are carefully worked out and the products tested in scientifically equipped laboratories under the very best conditions. Is it not plausible to assume that these preparations are, at least, as good as those evolved with far inferior facilities by the mercenary nostrum maker who claims all the law will allow?

Evans Cancer Cure—Dr. R. D. Evans, of Brandon, Manitoba, sells a "positive cure for cancer." The price is "one hundred dollars in advance." The victim who parts with $100 for this cruel and worthless fake is told to shave a patch about the size of a silver dollar on the crown of the head. The "cure" is applied to this spot. This is for the treatment of internal cancer. "For 'external cancer' the discovery is applied on the spot." From an analysis made in the A. M. A. Chemical Laboratory, it was evident that Evans Cancer Cure is essentially a mixture of 1 part of a fatty substance (such as lard) and 5 parts of dried ferrous sulphate.—Journal A. M. A., June 3, 1922, p. 1739.

The Intravenous Use of Acacia—It is now generally accepted that acacia has a limited and uncertain usefulness. The intravenous use of acacia is a recent therapeutic procedure, and apparently sufficient time has not elapsed for the thorough appraisal of its use as a therapeutic remedy. Bearing in mind the accidents from the use of acacia that have been reported, the lack of agreement as to its beneficial effects among surgeons who have tried it, the experimental evidence that has been reported as to its deleterious effects and the paucity of data indicating its clinical usefulness, conservative practitioners will still withhold their verdict. Moreover, the questions of intravenous therapy, which are involved in any discussion on the use of acacia in shock, hemorrhage and allied conditions, are an important and serious complicating consideration.—Journal A. M. A., June 17, 1922, p. 1897.

Therapeutic Uses of Yeast—If the medical profession will assist in educational work, patent medicine exploitation of the public in the name of vitamins will undoubtedly fail. Quite a few new yeast products and other so-called vitamin extracts are being put on the market, but, on the whole, the public is not using them, and the advertising seems to be a failure. However, the matter seems sufficiently grave for the State Board of Health to issue warning to the effect that ordinary diet contains enough and more than enough vitamin for all practical purposes, and that vitamin extracts are largely inert. In the few cases in which vitamin is indicated, the vitamin carrier, like Cod Liver Oil, orange juice should be used, and no attempt made to concentrate.

Laxatives—Untoward Effects of Laxatives—Lately a number of instances of cutaneous manifestations due to the use of phenolphthalein as a laxative drug have been brought to the attention of physicians, particularly by dermatologists. Now Underhill and Errico have demonstrated that when magnesium sulphate, sodium sulphate and potassium and sodium tartrate are administered experimentally in doses capable of producing diarrhea, a distinct concentration of the blood may take place. The fact that purgatives exert a definite influence, in the direction of concentrating the blood, indicates that care should be exercised in the administration of purgatives in disease conditions, especially in those conditions known to be responsible for concentrated blood. Blood concentrated to some extent, and yet not sufficiently concentrated to be dangerous in itself, may reach a dangerous concentration by the added influence of the purgative.—Journal A. M. A., June 24, 1922, p. 1964.

California State Journal of Medicine

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VOL. XX OCTOBER, 1922 No. 10

"The Obtuse Triangle"

Chiropractic-Osteopathic-Anti-vivisection Initiatives! These three weird sisters meet again obtusely repeating the same old stories in the same old way. "Fair is foul and foul is fair" is still their campaign slogan.

In the light of well-known facts, their clamorous claims and absurd accusations of persecution, incompetency, injustice and cruelty hurled at a mythical "Medical Trust" vanish into thin air.

All three prate about "Rights." One would make the *rights of rats and guinea-pigs* superior to man, whilst the other two place the "rights" of their small groups above the majority. All three ignore paramount rights of the people and threaten to break down educational standards and vital public health safeguards. The three combined would permit the unqualified to practice unscientifically and prohibit the qualified from practicing scientifically.

This triple threat has been appropriately called "the obtuse triangle." Two members of the triangle attempt to get quickly—at the polls—what physicians and surgeons must obtain by years of study and special education. *Education Cannot Be Voted Into Them.* Alleged "graduates" of so-called colleges who fail to pass the State Examination need *More Education, Not More Examining Boards.*

All three falsely charge that those opposing these measures are inspired by selfish motives. Health Boards, hospitals, universities, research workers, clinics, laboratories, chemists, pharmacists, biologists, bacteriologists, social workers, the medical, dental, nursing, veterinary professions, et al., in the interests of public welfare, must oppose measures that would nullify educational standards, practically prohibit present scientific service and outlaw future scientific progress.

Devoted scientific men and women have built up dependable institutions and agencies to combat and conquer deadly diseases that attack man and all the living creatures over which he was given dominion. Their noble achievements, their daily curative and preventive work amply answer the obtuse proposals of this triangular combination.

No amount of lurid literature reeking with chiropractic pretense, osteopathic prejudice and anti-vivisection abuse can take the place of such scientific service.

Facts made the people defeat the Chiropractic-Osteopathic-Anti-vivisection measures at the general election in 1920 as unnecessary and unsafe legislation. *Facts* made the California Legislature repeatedly reject these measures as dangerous and destructive. We urge each voter to read the "Chiropractic-Osteopathic-Anti-vivisection Initiatives and *contrast their false issues with Facts.*

League for the Conservation of Public Health,

Balboa Building *San Francisco*

ORIGINAL ARTICLES

RESPONSIBILITY FOR STATEMENTS AND CONCLUSIONS IN ORIGINAL ARTICLES

The author of an article appearing in the JOURNAL *is entirely responsible for all statements and conclusions. These may or may not be in harmony with the views of the editorial staff. Furthermore, authors are largely responsible for the language and method of presenting their subjects. All manuscripts will be carefully read, but editorial privileges will be exercised only to a very limited extent. It is believed that the manner of presentation of any subject by any author determines to no small degree the value of his conclusions. Therefore, both the author and the reader, in our opinion, are entitled to have the subject as presented by the author as little disturbed as possible by the editors. However, the right to reduce or reject any article is always reserved.*

MYOCARDIAL INSUFFICIENCY.*

R. K. BARRY, M. D., San Diego.

In approaching this subject the first thing to consider is, what are the essential symptoms of myocardial insufficiency. While it is necessary in every case to recognize the evidence afforded by careful physical examination supplemented by the use of mechanical aids, it must be borne in mind that the facts when revealed do not give the information which is essential. The essential question for the physician to decide is whether the symptoms indicate the presence of an insufficient myocardium and the likelihood of heart failure. This knowledge can only be acquired in many cases by understanding what happens when the individual is engaged in some occupation that calls for some extra effort on the part of the heart. Hence all means of observation employed when the body is at rest can only yield very incomplete evidence. The kind of evidence which is essential is to be sought for in the symptoms evoked when effort is made, frequently only evoked then; as well as in the symptoms of functional insufficiency when the body is at rest. These symptoms are often so elusive and so insignificant that they readily escape the attention, while it is often difficult to appraise their value when detected. As our knowledge of what is meant by heart failure increases, the real significance of such symptoms will be revealed. Heart failure may be defined as the condition in which the heart muscle is unable to maintain an efficient circulation during the efforts necessary to the daily life of the individual.

Attacks of angina pectoris constitute a very definite clinical picture with which you are all quite familiar. Typically there is a sudden severe pain situated behind the lower sternum radiating perhaps to the neck or left shoulder or to the inner side of the left arm, associated with a strong sense of constriction of the chest, so that the breath is caught with difficulty and with a sense of great weakness and anxiety so that the patient feels that he will surely die. At the time of such an attack the patient is prostrated. The pulse may or may not be increased in rate but is often irregular. These attacks are very typical and are not difficult to recognize, either when they are seen or when the patient tells you about them, and I believe that to such attacks as these the term angina pectoris should be confined. Then we have a train of symptoms associated with coronary disease which differ somewhat from those of true angina. The pain, which is usually less severe, is a mid-line pain. Its characteristic seat is behind the lower sternum opposite the third and fourth intercostal spaces, at the xiphoid or in the epigastrium opposite the fifth intercostal space. Rarely it is felt as high as the second intercostal space. When severe it radiates and passes laterally to the left or right at these levels and may seem to pass through to the back. In the lesser manifestations or coronary disease seen early, there may be no pain at all but merely a sense of discomfort, felt especially under the lower sternum or in the epigastrium and not as the patient will say, "in the stomach." It is never a constant sensation, but comes in attacks, and these attacks either arise spontaneously when the patient is at rest or come on as the result of exercise, so that the patient must stop and rest until the discomfort passes off. It has a very peculiar character best described as a gripping or a sense of compression beneath the sternum. The pain occurring in cases of myocardial disease is of a different character from that of coronary origin, being mostly to the left of the mid-line and radiating to the region of the apex beat, or being felt only at the apex. It does not have the radiation to the back, neck or arm except when very severe, and is a more continued pain than the gripping paroxysmal pain of coronary disease. Its character is more aching even though it should be, as it sometimes is, very severe indeed. When these conditions cause pain there is nearly always objective dyspnoea, a very rare occurrence with coronary artery attacks.

The pain felt by neurotic patients and patients with hyperthyroidism is not in either case a mid-line pain, but lies to the left of the sternum, like the pain of cardiac disease, and is most often situated about the region of the apex beat. That these patients have typical areas of hyperalgesia may lead you to a stronger belief that organic disease is present, but you must not be deceived by this into a diagnosis of cardiac disease. These pains, like those of coronary disease, may be brought on or increased by exertion, but there is an irregularity of occurrence after exercise which is characteristic, and this taken with the lateral situation of the pain and the fact that it moves around, together with evidence of a neurotic make-up of the patient, should enable us to readily recognize the origin of the symptoms. It is important to remember that these pains do not occur with the milder forms of hyperthyroidism, so that the rapid pulse or tremor or some of the other signs or symptoms of Graves' disease will be pres-

* Read before the Southern California Medical Society, 65th Regular Annual Meeting in San Diego, 1922.

ent to help you. In looking over my records of cases of myocardial insufficiency I found fourteen cases that I have seen in the last year and a half in which the symptoms did not coincide with any of those above, and the true nature of the malady had not been suspected either by their physicians or by the patients themselves until the disease had progressed well toward a fatal termination. Nine of these patients have died and the other five are still under observation.

I have not included in these fourteen cases any case in which the symptoms attracted either the physician or the patient to the heart as the cause of the trouble, and wish to emphasize that none of these cases were considered heart cases until the disease was well progressed.

CASE REPORTS

Case I. Male 63—Had been a railroad official, now retired. Had complained for a number of years of indigestion. He had been treated by several physicians with no appreciable relief. He was generally advised that his malady was due entirely to his stomach and bowels and was dieted and given treatment along that line. One morning I happened to be at his home and was called into his room and found him deathly pale, covered with cold perspiration and unconscious. (This was the first time I had seen him professionally as he had been under the care of another physician.) He had arisen as usual in the morning and was feeling very well. He went into the bathroom to shave and suddenly fell and I was immediately asked to step in and see him. Upon examination his pulse was not felt at wrist and, listening over his heart, the heart beat was rapid and grossly irregular. As his pulse returned, a polygraphic tracing taken then showed the attack to be one of paroxysmal auricular fibrillation which soon subsided and the heart beat became perfectly regular except for an occasional premature auricular beat which soon disappeared, and I never found any irregularity in his pulse afterwards. He had no pain at any time and his only complaint was his indigestion and intestinal flatulence. He died in a neighboring city recently, and I will quote the following from a letter I received from his wife: "Mr. J. was very well all summer and we put off from month to month going down to see you. We had been out to Van Nuys all day, and after dinner he said: 'I feel exceptionally well tonight.' But a few minutes later gas began to bother him. I gave him soda but it didn't give him any relief. He had no pain in his heart but it beat very fast. He just said, 'I am so nervous, I can't stand it,' and became unconscious." I had this man under observation for some time after the first attack and outside of his heart being slightly enlarged there was nothing that would attract one's attention to it. The rate was normal, rhythm was regular. There were no abnormal sounds. There was no swelling of the feet, nor cough.

Case II. A man 54 years of age walked into my office complaining of pain in his stomach. He gave the following history: He had had a similar attack of indigestion, as he termed it, accompanied with severe pain while on the street two years ago and he was taken to the office of a chiropractor, who treated him for three weeks, during which time he was up and around. Since then he had been troubled a great deal with a sour stomach. He said that he ate too much, always having a good appetite. Under closer questioning he admitted having felt pain in the epigastrium after running, lifting, or going up hill. But all the time during the past two years he had done his work on his ranch and had been very well with the exception of his indigestion, which was always relieved immediately when he could get up the gas. Never had had any swelling of his feet; no cough except when he had a cold; never had rheumatism, tonsillitis or "flu," but his teeth were bad. He had had scarlet fever twenty years before, measles eight years before. On the day he consulted me he had carried two grips a considerable distance in Los Angeles and had taken the bus for San Diego. Soon after leaving Los Angeles he began to feel discomfort in his stomach, which increased, and when he arrived at Oceanside the discomfort had increased to such a degree that he went into the drug store to get something to make him vomit. After vomiting he felt better. He then stated that he knew it was his stomach, because he was always relieved after he could expel the gas. Examination revealed a well-nourished, well-muscled man, who had led an active outdoor life. His face was somewhat ashen, he was perspiring, held his hand over his epigastrium and complained of sense of fulness which was killing him and said if he could get something to expel the gas he would be all right, as he had had similar attacks before. His pulse was 84 regular, except for an occasional P. V. B. His B. pressure was 150 s. and 80 D. His apex was in the fifth interspace at the nipple line. The area of cardiac dullness extended 10½ cm. to the left of the median line and 3 cm. to the right. The first sound at the apex was split and second at apex was a trifle loud. At the base the aortic second was louder than the pulmonic. There were no murmurs anywhere except a slight after-tone to the aortic second heard at the ensiform. There were no rales to be heard in the chest. Urine S. S. showed a S. P. of 1026, no albumen, no casts. He was soon enough relieved to be taken home, although the distress never entirely ceased, and the next day there was some adema at the bases of the lungs, and he died suddenly while talking to his wife that evening. Post-mortem examination showed a heart somewhat enlarged, a thickened fibrous aorta with plagues, narrowed and sclerosed coronaries with complete occlusion of the left coronary by a thrombus.

Case III. Woman 60 years of age, who gave a history of abdominal symptoms for a number of years, always accompanied by gas on her stomach. She had been operated on for some pelvic disturbance and for appendicitis. She was now in the hospital to be operated on for a growth in the descending colon. I was called to examine her heart. I found a large, fleshy woman with some edema of her arms, giving a history of her feet swelling when she was up and around. She said she had a great deal of gas on her stomach and bowels, pain in her left side of abdomen, which had led up to where she was about to be operated for a growth in the descending colon. Upon examination, her pulse was 100, perfectly regular. B. P. 100, S. 70 D., area of cardiac dullness extended 11 cm. to the left and 4 cm. to the right of the median line. First sound at the apex was fairly good, the second at the apex was very faint, at the base the pulmonic second was much louder than aortic second. A faint systolic murmur was heard over the aortic second, but was not heard in the carotids. There were a few rales in both bases and a polygraphic tracing showed nothing except a variation in the output of the left ventricle. She said she felt quite well at present, except she was having a great deal of gas on her stomach. This patient was kept in bed and died suddenly about two weeks later, after excitement caused by transacting some important business. Dr. Thomson's report of post-mortem was as follows: Heart, large and moderately dilated, dark in color, right V. wall very thick, papillary muscles hypertrophied. Heart muscle very soft and friable, showed edema, was so soft that by a small amount of pressure the finger would go clear through. Chest contained fluid, both lower lobes of lung compressed. The descending colon was somewhat contracted, but showed no evidence of growth.

I have not the time to relate the histories of all these patients, but will give you a résumé of them. In eight cases the abdominal symptoms were accompanied at times with severe pain. Of this group of eight cases five of them had a blood pressure much below normal and in three the B. P. was slightly elevated. Six of this group are dead, all died very suddenly. Six of this group were males between the ages of fifty-four and seventy-six, and two were females between the same ages.

In none of these cases was there any valvular lesions of importance. The second group in which there were no attacks of pain, consisted of six patients, all males. Three of them had a low B. P. and in three of them the B. P. was slightly elevated. Three of this group are dead, all died rather suddenly according to reports; the exact termination I haven't been able to find out in all cases, as they died after leaving San Diego. Two of those that died had a low B. P. and in one it was elevated. Two of this group had pulsus alternans; in one the alternation followed a premature auricular beat, and in the other the alternation was continuous. The patient with continuous alternation is still alive, while the one with the short periods of alternation following the premature auricular beats is dead.

Of the whole series of fourteen cases only four of them showed a constant regular sequence of events in the cardiac cycle. Five of them showed periods of alternation in the polygraph tracing. Of these five three are dead and two are still living; of the remaining five cases one had an attack of paroxysmal auricular fibrillation; one had attacks of paroxysmal tachycardia with a short run of auricular flutter and is still alive, although he fell over in the park not long ago. Three showed only a premature V. beat, two of which are dead. Of the nine deaths all except two had some disturbance of the cardiac rhythm or pulsus alternans. In one of the cases with pulsus alternans, an electrocardognam showed a splintering of the Q. R. S. complex in lead 2.

Every one of the series had a heart enlarged to a point at or outside the nipple line, and eight of them had a B. P. below normal, six of whom are dead, while five of them showed a slightly elevated B. P., three of whom are dead. They all have this in common that months before the malignant nature of the malady had become apparent, mild gastric and abdominal symptoms had been complained of and the true nature of which had eluded some very competent observers.

The fourteen cases were all between the ages of fifty-four and seventy-eight, the greatest number being between the ages of fifty-four and sixty-five. There was no evidence of syphilis in any of them. None of them gave any evidence of gout, lead alcohol, nor the misuse of tobacco. I have not been able to trace any of these cases to a definite infectious origin. None of these cases were observed in my hospital work, all of them being observed in my private practice, which is the field par excellence for the observation of these cases.

The abdominal symptoms were the first signs of the myocardial insufficiency and none of them attributed any of their symptoms to their heart. In the mind of the patient all the symptoms were due to their stomach, otherwise why did the expulsion of gas give them relief. Some of them complained of fullness in the abdomen, having to loosen their clothing after eating and the escape of quantities of gas per rectum. The cardiovascular symptoms vary considerably after the case is well advanced. The pulse may be slow and regular, of good quality, and may be thus maintained throughout an attack accompanied by severe pain. One died and the pulse never went above 80 and suddenly stopped while I was counting it.

The presence of a myocardial insufficiency may first betray itself by some irregularity of the pulse or very low B. P. or the discomfort or pain following some exertion or eating. As the case advances it may develop alternation flutter, premature ventricular beats, premature auricular beats, paroxysmal tachycardia or parox, auricular fibrillation; the B. P. is more often abnormally low than high. In the two cases of which I was able to get a post-mortem, in one there was distinct evidence of aortic and coronary sclerosis, while in the other there was a soft friable edemitus heart muscle through which one could push his finger with slight pressure, with no mention of coronary disease. I think in this type the pain, if there is any, is due to the exhaustion of the heart muscle rather than to an interference with its blood supply, as probably occurs in the type with the attacks of paroxysms of pain. Also this latter group in the interval between the attacks are able to get around and feel comparatively well, while in the group without the pain there was a progressive failure of the heart muscle, and finally the symptoms of cardiac dilatation with edema, and so forth.

The first evidence that there is a cardiac factor as well as an abdominal one may be a sudden drop of the systolic B. P. to a point around 100. There is one school who think there is really an abdominal angina associated with sclerosis of the abdominal arteries, and another school who lean rather to the view that the abdominal symptoms are reflexes from thoracic pathological processes.

The pathological explanation of even true angina is still in dispute. The true coronarians see a degenerative process of the coronary arteries in all cases, while Osler, Graham-Steele and others cite autopsies in which they could demonstrate no lesions of the coronary arteries. Allbutt finds the supragsigmoid area of the aorta the seat of the disease. As to the cause of the pain, the intermittent claudication theory of Allen Burns seems to satisfy many competent observers. It may be defined as a state in which the artery admits enough blood for quiet work but not enough for increased work, and a heart the coronary arteries of which are sclerosed and non-elastic can well bring about this state. On the other hand, Mackenzie holds that the symptoms in all cases are due to exhaustion of the heart muscle; and if I may add my humble opinion, I believe that the type with the paroxysmal attacks of pain are due to some interference with the blood supply to the heart muscle,

while in the other type the symptoms are due to exhaustion of a *diseased* heart muscle.

TREATMENT

The treatment of the two types is different in some respects. Both types are benefited by prolonged rest, mental and physical relaxation, and reduced alimentation. The iodides seem to exert a beneficial influence given over a long period of time. The group of cases characterized by progressive myocardial exhaustion without pain are benefited more by digitalis than are those of the other group. It has been my habit to restrict the proteins somewhat in the type with paroxysmal pain, as well as to diminish the starches in the form of potatoes, bread and cereals. At the same time definitely diminishing the amount of food intake, while in the other group of cases it is usually better to allow a liberal protein diet. I am guided in this by the percentage of urea retained in the blood. The fluid intake allowed depends upon the tendency to edema. The abdominal symptoms are very difficult to relieve at first, but they clear up readily as the heart muscle regains its efficiency. The paroxysmal pain of the one group is usually promptly relieved by the nitrites, while the discomfort and abdominal symptoms of the other group are usually made worse by its use. The greatest difficulty is experienced in convincing the patient what his trouble really is. It is difficult to convince a patient that he must restrict his activities because of indefinite abdominal or gastric symptoms and that his life is in danger because he belches a little or suffers from abdominal gas.

(921 First National Bank Bldg.)

RAILROAD SURGEONS CONDEMN ANTI-HEALTH AND ANTI-EDUCATION INITIATIVES

The following resolution was unanimously adopted by the Pacific Association of Railway Surgeons at their annual convention at San Francisco, August 26, 1922:

Whereas, There are three anti-health and anti-education initiatives before the people to be voted on at the general election, November 7, 1922, namely, the Chiropractic, Osteopathic and Anti-vivisection Initiatives; and,

Whereas, The three combined would permit the unqualified to practice unscientifically and prevent the qualified from practicing scientifically, by lowering educational standards, nullifying vital public health safeguards, making physicians and surgeons out of drugless practitioners with no proper preparation or experience; and,

Whereas, Educated physicians and surgeons would be "debarred forever" under the terms of one of these Initiatives, for daring to use a few guinea pigs to save the lives of countless people, be it.

Resolved, That this twentieth annual meeting of the Pacific Association of Railway Surgeons, in the interests of public health and safety and all whom we serve, do hereby condemn singly and collectively the Chiropractic, Osteopathic, Anti-vivisection Initiatives and urge all those interested in the scientific study, prevention, cure and control of diseases and the promotion of public health to vote against these dangerous measures.

THE GREAT SECOND TYPE OF CHRONIC ARTHRITIS.

By LEONARD W. ELY, M. D., San Francisco

THIRD STUDY
(Synopsis of Previous Work.)

In several previous articles I have attempted to demonstrate that all cases of chronic arthritis can be divided into two great types or groups differing markedly in their clinical appearance, and radically in their X-ray picture and their pathological characteristics. The first type includes the bacterial infections, and has for its pathological feature a proliferative inflammation in the bone marrow, in the synovial membrane, or in both.

The second type differs sharply from the first in almost every way, and has received many names based on features which their originators deemed important. Among these names may be mentioned arthritis deformans, osteoarthritis, hypertrophic arthritis, degenerative arthritis, metabolic arthritis, senile arthritis, destructive arthritis. The disease has been variously ascribed to trauma, loosely to infection and to some mysterious error in metabolism, some unknown chemical substance floating in the blood stream. I have shown that the disease could not be caused by trauma. The morbid changes in the joint are as different from those caused by bacteria as black is from white, and our efforts at Stanford to obtain bacterial cultures from the bone marrow and from the joint fluid have been uniformly unsuccessful. In such a situation the easiest way out is to take refuge in words, and to say that the disease must be due to metabolic error, to a dyscrasia, to a diathesis, to autointoxication from the colon, to a displaced vertebra or to an error of mortal mind.

This disease is characterized clinically by the presence of bony and cartilaginous ridges at or about the lines of attachment of the capsule, revealed by the Roentgen film. The surgeon who operates upon an affected joint makes his diagnosis upon this production of bone and cartilage, and the pathologist in the laboratory, recognizing the bone and cartilage changes, also bases his diagnosis upon them, and has always maintained that they were the characteristic and fundamental feature of the disease.

I have shown that the changes in the bone and in the cartilage were not primary but were the result of a previous aseptic necrosis in the marrow in the vicinity of the joint. This necrosis affects the bone and the marrow, giving rise to larger or smaller sequestra, and later to cysts, to bone cavities and to the so-called ostitis fibrosa. I have tried to establish the connection of this disease with fracture of the neck of the femur in the aged, and with the arthritis which follows an intra-articular fracture in an elderly person. The whole appearance of the lesion of the bone pointed strongly to a non-bacterial infection as the cause, but up to a few months ago I had never been able to discover any clue as to the nature of this organism.

In two previous papers I had called attention to the coincidence of infection in the alveolar proc-

esses of the jaws in patients suffering with this form of arthritis, and ascribed to this alveolar infection a direct and primary role in the causation.

This is as far as I had been able to go until this year. I quote from a paper prepared for presentation to this Society at its meeting last year, and published in the STATE JOURNAL: "No proof is at hand of the presence of infection in the bone marrow or in the joint fluid. Presumably the necrosis is due to a low-grade infection. In this case the organism itself must die out, or else is of such a nature as to escape detection with our present methods of examination."

WORK DURING THE PAST YEAR

The problem then narrowed itself down to this: What form of organism, not a bacterium, gains access to the circulation through the diseased bone at the roots of dead teeth, and, carried to the bone marrow, causes a necrosis, but never suppuration? Last autumn Dr. J. V. Barrow found the amoeba in the stools of one of my patients suffering with this form of arthritis, and I had the privilege shortly afterward of a long talk with him. Many observers hitherto have suggested a relationship between the amoeba and chronic arthritis, or chronic rheumatism as they were wont to call it. The point here was that the pathological lesion which I have demonstrated to be the primary and essential feature of this particular form of arthritis is exactly what one would expect if the amoeba gained access to the bone marrow. I am firmly convinced that a protozoön is responsible for the disease, as I should be sure of the presence of a gopher if I saw a small, peculiar pile of dirt in a field, and I should not be turned aside by anyone who ascribed it to planetary disturbances or to an excess of carbohydrates in the soil.

The next step was to find the amoeba, to dig up the gopher, so to speak. I recut my material, stained it with iron haematoxylin, and submitted sections of five joints to several authorities. Kofoid and Swezey maintain that they found amoebae in the marrow of one specimen. Their claim at present lacks confirmation, but it is suggestive and opens up an interesting field for investigation, a field which my associates, Doctors Reed and Wyckoff, are cultivating with me, assisted materially by Doctor Gunn. We realize that we have a hard task before us, but we propose to go to the bottom of the matter before we finish. Up to date we have found the amoeba in the stools of only two or three of our patients, as Doctor Reed will tell you.

As to the identity of the organism: I am not yet prepared to acquit the amoeba gingivalis of all blame, and to regard it as harmless in all circumstances, as do most authorities. It may be harmless at the roots of the teeth, but not harmless in the bone marrow. The almost invariable presence of alveolar infection in this disease is at least strong circumstantial evidence.

Kofoid and Swezey are fairly positive of their identification of the amoeba histolytica in one of my specimens, and ascribe the organism as occupying the exact situation which the nature of the fundamental lesion would indicate, namely, ranged along the finer capillaries of the marrow near the joint.

Concerning the symptomatology and pathology I have nothing to add to the descriptions in my two earlier studies. As to treatment: The first indication is to remove the infection about the roots of the teeth—to close the portal of entry, so to speak. Extraction is the only rational procedure, in my opinion. My experience with the so-called radical operation, that by chiselling away the alveolar process, and cleaning out the suppurating osteomyelitis is not such as make me eager to recommend it to others. Simple extraction gives the best results.

The next step in the treatment is to search for amoebae in the stools of the patient, and to eradicate them by some preparation of ipecac if they be present.

In certain cases, in which the pain continues after the removal of the focus of infection in the jaws, the injection of a foreign proteid intramuscularly may be of service. In this connection it should be remembered that when a joint is badly damaged mechanically by the disease, the pain and discomfort felt when it is used may persist, even when the active disease has subsided.

Hydrotherapy and dry heat will also be found of help to quiet the pain. In the severe cases of this form of arthritis, occurring in a single joint, as in the knee, or especially in the hip, a resection often offers the best way out.

Most cases of brachial neuritis, myositis, fibrositis, radiculitis, lumbago and sciatica, will on examination be found due to a spinal arthritis and will improve under treatment along the lines I have indicated.

NEW CASES

Following is a tabulation or seventy-three new cases seen at the Stanford Clinic during the past year. In numbers, and in almost every way, they run about parallel to the two preceding series. The presence of alveolar infection is determined almost invariably by our dentist, Dr. Campbell, with the X-ray.

Fifty-six of the patients were men, seventeen were women. The youngest was 27 years old, the eldest 87. One patient was in the third decade of life, sixteen in the fourth, seventeen in the fifth, sixteen in the sixth, eighteen in the seventh, five in the eighth, and one in the ninth. Alveolar infection was present in fifty-two patients, probably present in eleven patients. Five of these latter did not have radiograms taken. In one patient the question of alveolar infection was not determined. All teeth were gone from the mouths of eight patients. This is prima facie evidence of previous infection. Alveolar infection was absent in only one case.

The analogy of the cases in this series with those in the two preceding is so close that the disease might almost be charted with regular curves. Basing the statement upon clinical and laboratory work I think we are now justified in laying down the following description:

The great second type of chronic arthritis is

probably caused by a protozoön which almost invariably gains access to the system through the diseased bone at the roots of decayed teeth. Its prime pathological characteristic is an aseptic necrosis in the marrow in the immediate vicinity of the joint, and it is recognized radiographically by the presence of the spurring and lipping at the lines of attachment of the capsule. It is about twice as frequent in men as in women as clinically observed. It is distinctly a disease of middle and late life, and never occurs before the third decade. Up to date the best results in treatment have been obtained by the removal of the focus in the alveolar process of the jaws.

No.	Age	Sex	Occupation	Joints Involved	Alveolar Infection
153	45	F.	Housewife	Knees	Present
154	33	M.	Laborer	Tarsus	Present (Complete recovery)
155	58	M.	Baker	Hip Old healed fracture of neck	Present
156	33	M.	Glasshouse factory worker	Spine	Probably present. Would not have teeth X-rayed
157	45	M.	Laborer	Spine	Present
158	67	M.	Laborer	Spine	Present
159	36	M.	Laborer	Spine	Probably present
160	48	F.	Student	Knees	Not determined
161	64	M.	Laborer	Knee	All teeth removed 20 years previously
162	62	M.	Laborer	Spine	Present
163	56	F.	Housewife	Shoulder and knee	Present
164	34	M.	Laborer	Spine	Present (probably)
165	43	M.	Laborer	Spine	Present
166	52	M.	Carpenter	Spine	Present
167	42	M.	Laborer	Spine	Present
168	52	F.	Domestic	Hands	All teeth gone
169	52	M.	Barber	Spine	Probably present
170	73	M.	Janitor	Knees	Present
171	55	M.	Laborer	Knee	Probably present
172	35	F.	Housework	Sacro-iliac	Present
173	35	M.	Laborer	Spine	Present
174	61	M.	Tinsmith	Spine	Present
175	65	F.	Housewife	Knees	Present
176	50	M.	Laborer	Spine	Present
177	67	M.	Salesman	Spine	All teeth gone
178	78	F.	Housework	Knee	Present
179	57	F.	Housework	Knees	Present
180	48	F.	Housewife	Knees	All teeth had been removed for decay
181	56	M.	Motorman	Spine	Not determined by X-ray. Teeth suspicious
182	63	M.	Lumberjaek	Spine	Apparently present about few remaining teeth. No X-ray taken
183	40	M.	Laborer	Spine	Apparently present. No X-ray taken
184	53	F.	Housework	Knee	Present
185	67	M.	Railroad worker	Multiple	Present
186	27	F.	Domestic	Spine	Present
187	46	F.	Dressmaker	Knee	Present
188	48	F.	Laundry work	Knees and feet	Present
189	48	M.	Laborer	Spine	Present
190	66	M.	Laborer	Knee	Present
191	67	M.	Laborer	Spine	Probably present. No X-ray taken
192	52	M.	Seaman	Spine	Present
193	66	M.	Laborer	Spine	Present
194	65	M.	Laborer	Spine	Present
195	42	M.	Carenter	Spine	Present
196	63	M.	Laborer	Wrist	Present
197	70	M.	Stonemason	Spine and aeromioelavicular	Present
198	52	M.	Tailor	Spine	Present
199	60	M.	Laborer	Multiple	Present
200	46	M.	Expressman	Spine	Probably present
201	48	M.	Laborer	Spine	Present
202	36	F.	Officeworker	Spine	Present
203	56	M.	Blacksmith	Spine	Present
204	34	M.	Waiter	Spine	Present
205	75	M.	Watchman	Spine and shoulder	Present
206	49	M.	Houseman	Spine	Present
207	39	M.	Stevedore	Spine	Present
208	49	M.	Laborer	Spine	Present
209	67	M.	Glazier	Shoulder and aeromioelavicular	All teeth gone
210	50	M.	Packinghouse worker	Hips	Absent
211	63	M.	Cook	Spine	Present
212	54	M.	Laborer	Spine and shoulder Dupuytren's contraction!	Present
213	76	M.	Laborer	Spine	All teeth gone
214	35	M.	Laundry worker	Spine	Probably present. No X-rays
215	35	M.	Laborer	Spine	Present
216	61	M.	Solicitor	Spine	Present
217	32	F.	Housewife	Knee	All teeth gone
218	60	M.	Cook	Spine and feet	Present
219	43	M.	Laborer	Knee	Present (Note—Amoeba found in stools)
220	46	F.	Housewife	Spine	Present
221	39	M.	Salesman	Spine	Present
222	38	M.	Laborer	Spine	Present
223	63	M.	Driver	Knee	Present
224	87	M.	Ex-miner	Spine and knee	Edentulous
225	37	F.	Stenograher	Spine	Present

MEASUREMENTS BASED UPON ROENTGEN EXAMINATION OF ONE HUNDRED NORMAL CHILDREN.*

By ELISABETH SCHULZE, M. D.
(From Department of Roentgenology, University of California Medical School)

Much has been written about the pituitary and its normal function in growth and development, as well as about disorders arising from disturbed function. Aside from the changes and symptoms to which these disorders lead in accessible parts of the body the most direct method of approach to investigation on the living subject is the X-ray study of the size and shape of the sella turcica. Various investigators, undertaking to define the normal latitude of variation in the size and shape of the sella, have come to the conclusion that there is a wide range of variability in individuals presenting no evidence of pituitary dysfunction clinically. Others have found that cases with fairly marked clinical evidence of dysfunction may occur which do not present any deviation from the normal limits, as far as the size and shape of the sella is concerned.

Recently A. J. Pacini, in attacking this problem, has called attention to an angle at the base of the skull, the so-called sphenoidal angle of Welcker; and to the possible relation of the size of this angle and the type of sella accompanying it, to pituitary functional disturbances which could not be determined by study of the sella alone. The angle, originally described by Virchow many years ago, and then studied by Welcker and Broca, and concerning which very little has since been contributed, lies between two lines in the central sagittal plane of the skull. One line extends from the nasion, or anterior central point of the fronto-nasal suture, to the turcicon, or the middle point of the sella; the other extends thence to the basion, or anterior point of the rim of the foramen magnum. In making his studies Pacini chose instead of this angle, another, which is a little more easily laid out on the X-ray plate, namely, the angle between the lines, one, as above, running from the nasion to the turcicon, but the other running thence to the akousticon, or uppermost point of the external auditory meatus shadow, instead of to the basion. This angle, he maintains, is directly analogous to the original sphenoidal angle of Virchow and Welcker. Although there are a number of statements in the body of the paper and in the conclusions, which, probably owing to typographical error, are directly contradictory to each other, I believe that the impressions which he wished to express are as follows: The angle of Welcker, which normally is flattest in infants, becomes progressively more acute in the child, the woman, and the man (representing progressive stages in skull evolution). With this progressive narrowing of the angle, the sella, which in a measure surrounds the apex of the angle, is opened up so that the clinoid processes diverge more and more and the volume of the pituitary increases. In other words an obtuse angle and a closed sella (apparently meaning one in which the clinoid processes seem to closely approach each other or to overlap on the X-ray plate) are characteristic of the child and woman, while a more acute angle and an open sella are characteristic of man. If pituitary function becomes abnormal before skeletal growth is complete this relationship may be disturbed. Thus, a female type of angle (obtuse) may be accompanied by an open sella, indicating hyperpituitarism, or a male type of angle (more acute) may have a closed sella, indicating hypopituitarism. Other similar points are brought out. The average measurement of the angle (for adults) is 135 degrees; females should range above this and males below, the extremes being 160 degrees in a woman and 110 in a man. Children would presumably range from very high to the average reading, according to their ages.

In order to verify, if possible, some of these statements, and also to bring out new points of interest, one hundred normal children fairly evenly distributed as to age from three to sixteen years, were studied. There were about equal numbers of the two sexes. Among these children there were many groups of brothers and sisters. Careful measurements of the height (standing and stem-length) and the weight were made, as well as a rough estimate of the intelligence. Most of the children conformed to the limits of the averages determined for these measurements by Burke and others from very extensive material. A number, while a little above or below the average, were still within the normal limits of individual variation. The intelligence varied from very bright to dull, without any distinctly abnormal cases.

X-rays were taken of the hands and wrists to study centers of ossification, etc.; and of the skull, an attempt being made to get an absolutely true lateral of the sella in every case, but here considerable difficulty was encountered. Pacini's technique, as described, if accurately followed, gives a true lateral, but the least deviation (which is hard to avoid unless the greatest care is exercised) causes a wide variation in the measurement of the angle he describes, that is, if one takes into account only the external auditory meatus of the side next to the plate. Pacini makes no mention of using both. However, if the angles to both meati are measured and the reading midway between the two is taken, it remains quite constant for any reasonable deviation on a lateral plate, and measures the same as that obtained by very accurate technique. It does not make any difference which side of the head is next to the plate, although Pacini laid great stress on this point. These points were very clearly demonstrated by taking pictures of a skull in which the angles themselves were actually outlined with wires, also by checking these findings on numerous living subjects.

When the angle was measured by the Pacini method it was found to range from about 140 to 165 degrees in these normal children, the average being 151 degrees, and there being no appreciable average difference between the younger and the older children, nor in the heavy and light weight, nor in the tall and the short.

* Read before the Section on Radiology of the California Medical Association in Yosemite National Park, May 18, 1922.

Thinking that perhaps more acute angles would be found in adults, one hundred normal cases were measured, about equal numbers of males and females, and the range in males was found to be from 135 to 165 degrees with an average of 149 degrees, while in females it was from 138 to 160 degrees with an average of 147 degrees, in other words so slight a difference as to be of no practical importance. A few cases of hyper and hypofunction of the pituitary with and without recognizable sellar changes were also measured and gave no different or distinctive findings. As one may readily note, these figures are much higher than those given by Pacini. The only way I can account for the discrepancy is that Pacini perhaps measured from one meatus only and so may not have gotten the true value of the angle, or that he had a different type of patients, which does not seem very probable since a number of nationalities were included in our series, and no constant difference was noted.

Concerning the width of the space between the anterior and posterior clinoid shadows, which Pacini lays stress on, nothing characteristic could be made out. There was a wide variation without particular relation to age, sex, or size of the sphenoidal angle. With the general increase in the size of the skull the sella increases in size also.

Finding these results rather ungratifying, an attempt was made to mark out the true sphenoidal angle of Welcker on the plates and to see if anything could be gained by a study of it. We found that after it had been mapped out by wires on a dry skull and then located in Roentgenograms of this, it was also fairly easily located on plates of the living subject, and in no case did the angle as measured vary more than three or four degrees in different pictures of the same subject. The measurements thus obtained conformed much more closely to those given by the old anthropologists for this angle. Welcker gives a table in which, from the measurement of eight infants, he obtained an average of 141 degrees, from ten children 137 degrees, and from thirty adults 134 degrees. While these figures were obtained from accurate measurements on the skull, the difference is so slight that it would be difficult to check on X-ray plates, since it is almost within the limits of error by this method. The measurements actually obtained from X-rays varied from 122 to 142 degrees, running slightly higher in the younger than the older groups, the general average being about 133 degrees.

Aside from this matter of sphenoidal angles a few other points of interest were noted.

Tracings were made of the size and shape of the sella as shown on the X-ray plates and a definite resemblance in the size and conformity of the sella in individuals belonging to the same families was noted. About twenty-five family groups of two to five children were studied. No reference to this observation could be found in the literature, although Schuller has called attention to the fact that there is a family resemblance in the shape of the bones of the head, and that this accounts as much or more than the configuration of the soft parts in bringing about a similarity of features.

A slightly calcified pineal, verified by another plate, was found in a girl of thirteen years, seven months, apparently normal.

The time of appearance of centers of ossification in the wrists and of epiphyses showed a wide variation and was not always the same for the two wrists of the same individual.

CONCLUSIONS

The angle of Pacini was not found to be analogous to the sphenoidal angle of Welcker, nor could his measurements for his angle be confirmed.

There is a definite family resemblance in the size and shape of the sella.

I wish to express my apreciation of the valuable advice and aid of Dr. H. E. Ruggles in the preparation of this work. He has suggested other measurements, such as the ratio of the distance from the naison to turcicon, to the distance of the point of the chin from the turcicon, which give promise of being much greater value and which will be the basis of a later report.

ABOUT BIRTH CONTROL

Whatever else one may think about birth control and methods for making it effective, the much expressed modernity of the idea is probably about as accurately stated as are many other so-called "scientific facts." Adolph Koenig (Pennsylvania Medical Journal, August, 1922), calls attention to Elegy XIV, Book II, Ovid, written about the time of the birth of Christ, a translated quotation of which is interesting and instructive:

"Because thy belly should rough wrinkles lack,
Wilt thou thy womb-enclosed offspring wrack?
Had ancient mothers this vile custom cherished,
All humankind by their default had perished;
Or stones, our stock's original, should be hurled
Again, by some, in this unpeopled world.
Who should have Priam's wealthy substance won,
If watery Thetis had her child fordone?
In swelling womb her twins had Ilia killed,
He had not been that conquering Rome bid build.
Had Venus spoiled her belly's Trojan fruit,
The Earth of Caesars had been destitute.
Thou also, that wert born fair, had'st decayed,
If such a work your mother had essayed.
Myself, that better die with loving may,
Had seen, my mother killing me, no day.
Why tak'st increasing grapes from vine trees full?
With cruel hands why dost green apples pull?
Fruits ripe will fall; let springing things increase;
Life is no light price of a small surcease.
Why with hid irons are your bowels torn?
And why dire poison give your babes unborn?
At Colchis, stained with children's blood, men rail,
And mother-murdered Itys they bewail.
Both unkind parents; but, for causes sad,
Their wedlocks' pledges venged their husbands' bad.
What Tereus, what Jason you provoke,
To plague your bodies with such harmful strokes?
Armenian tigers never did so ill,
Nor dares the lioness her young whelps kill.
But tender damsels do it, though with pain;
Oft dies she who her paunch-wrapped child hath slain;
She dies, and with loose hairs to grave is sent.
And whoe'er see her worthily lament.
But in the air let these words come to naught,
And my presages of no weight be thought.
Forgive her, gracious gods, this one delict,
And on the next fault punishment inflict."

CLINICAL MISTAKES IN GYNECOLOGIC DIAGNOSIS*

ROLAND E. SKEEL, M. D., Los Angeles.

Science is defined as exact classified knowledge, and art as the application of scientific principles. It is with the conviction that we are losing much in the Art of Medicine through focusing too strongly on the results of the tremendous development of medical science that this short paper is presented for discussion, and to this end, gynecologic diagnosis has been selected in preference to the diagnosis of other abdominal and pelvic diseases, because the most vivid illustrations of the type of mistake which we have in mind are found in the former.

Similar mistakes in diagnosis and in treatment, based upon an erroneous assumption of the relation between the disease process and the symptoms presented, are to be found when the stomach, gall bladder, appendix or colon are suspected, but for various reasons these are not so common as in the gynecologic field.

It is perhaps true that gynecologic diagnosis is less susceptible of pre-operative laboratory confirmation than the others mentioned, but ocular inspection and bi-manual palpation give such direct access to the female pelvic organs that gross mistakes as to the pathologic condition are relatively infrequent. Such as do occur may often be laid to an incorrect history given by the patient, who denies a previous pregnancy, deliberately lies about her menstrual history, or consciously or unconsciously denies all symptoms pointing to an old gonorrheal infection.

At other times inadequate examination or imperfect knowledge leads to the treatment of pruritus vulvae without examination of the urine, the assumption that leucorrhea is due to chronic corporeal endometritis or that intermenstrual spotting is of no particular significance. These are matters of common elementary knowledge and do not come within the scope of the present discussion.

It is a less tangible subject that we wish to discuss, viz., our mistakes in diagnosing the relationship between the objective signs of disease or abnormality and the subjective symptoms of which the patient complains, and the best line of approach may be to question why patients consult the physician, and how pelvic abnormalities happen to be discovered.

It is evident that the routine physical examination to which the general physician, general surgeon, urologist or gynecologist submits his patient may bring these to light, and a correct estimate of their bearing upon the patient's subjective symptoms is of great importance if she is to be relieved of her discomfort.

On the other hand, the patient may present herself because of some obvious physical sign such as an enlarging abdomen, a protruding mass at the vulva, or a vaginal discharge, or she may be the victim of local pain which she attributes to disease of her generative organs.

On his part the examiner may discover a lesion, like early cancer of the cervix or true ovarian cystadenoma, which, left to itself, is necessarily fatal, and in such an event his course is plain, regardless of the character of the subjective symptoms or even their entire absence.

He may discover other lesions, such as prolapsus uteri, symptomless fibroids, pyosalpinx, or gonorrheal endo-cervicitis, none of which necessarily or even frequently jeopardizes life, but any of which do endanger the future health; or he may find any one of an array of minor deviations from the normal, and associated with them a great variety of symptoms, pelvic pain, backache, headache, dysmenorrhea, "nervousness," etc., which may be, but more frequently are not, in any way referable to the pelvic lesion which the examination reveals.

It has been considered axiomatic that successful treatment depends upon a correct diagnosis, but we hold it more nearly true that successful treatment depends upon that accuracy of prognosis which follows a *complete* diagnosis. Thus the treatment for carcinoma of the cervix is dependent upon the stage which the disease has reached when the diagnosis is made, rather than the fact that cancer exists. Opinions might differ as to whether an individual patient should be operated upon, be subjected to radio-therapy, or left without radical treatment, all in accordance with the knowledge and previous experience of the physician consulted, but the ultimate factor governing his advice would be an estimate of the prognosis either with or without treatment, so that an absolute mistake in diagnosis might be of no more serious import to the patient than an imperfect opinion of the outcome under any one of the various forms of treatment possible. However, in such a necessarily fatal disease the subjective symptoms of the patient are of no consequence; it is the disease only which counts, and symptoms can be ignored.

It is somewhat different in those pelvic disorders which infrequently jeopardize life but do menace the health, and it demands a most thorough and accurate study of the patient as a whole to be able to make a complete diagnosis and suggest the line of treatment to pursue. Two patients recently have come under my observation who illustrate the damage which follows hasty, ill-advised or illogical treatment. One woman of thirty had suffered a panhysterectomy five years previously for no better reason than that a deep laceration of the cervix might lead to cancer, and another of sixty submitted to a hysterectomy for a symptomless fibroid nodule no larger than a cherry. A third patient died in consequence of an operation for peritoneal adhesions which, even though they existed, were symptomless.

All of these reveal a correct pathologic diagnosis, but an utterly false clinical diagnosis, which was based upon an erroneous conception of the prognosis of cervical lacerations, uterine fibroids and intra-peritoneal adhesions per se. All of these are potentially serious, but under the circumstances, and with no symptoms that would justify interference, not one approached in gravity the operation which was performed for its relief.

* Read before the Section on Obstetrics and Gynecology of the Medical Society of California at Yosemite National Park May 15, 1922.

Aside from the injustice of major operations for minor difficulties another phase must be taken into consideration. Without a doubt more than one patient with a similar lesion was likewise advised that an operation was necessary, refused surgical interference, and has continued to live a comfortable, happy life under the guidance of one of the devotees of the anti-medical cults, to the discredit of medicine as a whole and surgery in particular. Now neither medicine nor surgery has reached the accuracy of deduction of an exact science, and human fallibility alone is productive of enough legitimate errors in diagnosis and prognosis without having our art overloaded by clinical mistakes of this particular type.

If care is necessary in order to avoid these mistakes, it is even more so in such conditions as minor injuries to the pelvic floor, ordinary cervical lacerations in young women, and the whole gamut of malpositions of the uterus. A great number of malpositions associated with pelvic discomfort, backache, dysmenorrhea, and irregular menstruation, occur in women whose bodily form and mental reactions point unerringly to poor development, while in others the symptomatology presented is so inconsistent and broadcast, as it were, as to make it apparent at first sight that the trifling gynecologic lesion means nothing more than that such lesion happens to be present in a psychasthenic or neurasthenic woman. Picking the history apart and delving into the private lives of these individuals is much more likely to give a clue to the proper treatment than jumping to the conclusion that the pelvic abnormality is responsible for the symptoms, and proceeding at once to dilate the cervix or shorten the round ligaments.

It is not intended to convey the opinion that a cervix never requires dilatation or a uterus reposition and support. If a cervix does require dilatation it is because the symptoms which exist are unequivocally those of obstruction, and if temporary replacement of a retroverted uterus overcomes the patient's local discomfort so definitely that the result cannot be attributed to mental suggestion, that uterus should be provided with some form of permanent support.

Local treatment for its suggestive effect may on occasions be perfectly legitimate, but as a general rule the result of fixing an abnormally introspective mind on a reasonably healthy set of pelvic organs is so disastrous that it should be undertaken with the greatest circumspection.

Honest mistakes of the kind we are discussing seem to me to arise from a number of sources and to be avoidable to a great extent. Many of them, no doubt, are an inheritance from the days when gynecology was in its infancy and a woman was regarded as only "an organism around a womb." Others arise from the fact that so many superficially educated, so-called cultured, people are entirely devoid of a commonsense knowledge of their bodies, and are superstitious to the last degree concerning them. Even in this advanced scientific age many are not willing to grant us as much time to investigate the extremely complicated human machine as they would give a garage mechanic to find why their motor had ceased to function. On our side we dislike having even the stupidest patient think we are less smart than our colleague whom they will consult when convinced that care in arriving at conclusions on our part means incompetence — hence we make a snap diagnosis.

Among the minor matters that contribute to our failure accurately to estimate the factors (the so-called imponderables) we cannot fathom by our senses and instruments of precision, is the necessary one of history taking. I defy the man who asks questions and writes, writes and asks questions, to show as broad an insight into the patient's condition as the one who merely asks his questions without writing. This may seem trivial, but it has appealed so strongly to me that in any obscure case, if I must take the history myself the diagnosis is deferred to a later date, when I can refer to the history, and quiz without writing.

Intensive and narrow specialism is another reason for these clinical mistakes. *Specialism* is responsible for many of the most important advances in medical knowledge, but *specialists* are unsafe guides unless they have the proper fundamental groundwork, and a broad experience in medicine and surgery as a whole. The ideal specialist is said to be one who knows as much about every part of the body as any one, and more about that in which he specializes. This ideal of course is impossible of attainment, but I am inclined to think that it is most nearly approached by one who is driven into his line of work by an unconscious fitness which makes him study his subject until he knows it so well that his colleagues give him no time to practice anything else.

In any event, such a specialist is not likely to attribute occipital headache to a prolapsed ovary, left-sided inframammary pain to salpingitis, or a burning sensation in the abdomen to endometritis.

Last, I think many of our mistakes in this field have arisen because of the enormous strides made in laboratory diagnosis. Both in this and the preceding subject of specialism, the complaint is, not that they themselves are deserving of criticism, but that certain undesirable by-products have been thrown off during their generation and development. The laboratory does not concern itself with individuals but with fluids and tissues, their abnormality or otherwise. It is concerned with material and physical findings, not with the reactions of the brain to the multiplicity of sensations which reach it from all the sense organs and sensory endings in the body. Hence while the laboratory is a guide to the diagnosis of disease, it is of little or no assistance in explaining the symptoms produced by disease, or the symptoms which may exist entirely independent of any disease diagnosable by laboratory methods.

It may be sufficiently accurate to consider one gynecologic patient as a *case* of gonorrhea, another as a *case* of cancer, and still another as a *case* of ovarian tumor, because in these the pathologic process mentioned is the predominant factor. It is, however, a gross mistake to attempt to solve the trouble equation by the same formula when an unmarried woman, below weight, with a long, narrow thorax and descent of all her abdominal

viscera, presents herself with spasmodic dysmenorrhea and is found to have a small ante-flexed uterus; or, when the woman of thirty, who has suddenly grown stout, wishes to know why her menses are irregularly late and scanty, and her uterus is discovered to be atrophic.

These are not *cases* of uterine anteflexion, infantile uterus, or hyper-involution; in fact, they are not gynecologic cases of any sort, but purely the local results, one of general maldevelopment, the other of thyroid dysfunction.

One might mention patients of another type like the multipara who has borne and nursed three or four children in as many years, who has small cervical and perineal lacerations, and complains of backache and general weakness, who is not a *case* of lacerations but a woman who has been chained to her domestic duties, has exhausted herself by attention to her children, and has a holy and well-grounded fear that respect for her contracted marital relations will lead to more babies, more work, more nursing and more expense. Repair of her injuries may help her temporarily because she is given a cathartic, put to bed and subjected to an entire change of surroundings, but the treatment is based upon an erroneous diagnosis nevertheless.

What we have been endeavoring to arrive at is difficult to put in words both exactly and precisely, but perhaps we can best summarize it by repeating that there are a very limited number of gynecologic diseases in which the pathologic and clinical diagnoses run parallel, and in them we make but few mistakes. These are exemplified by carcinoma of the uterus and ovarian cystadenoma.

There are a number of others in which the pathologic process is plain, but its effect upon the patient's present or future health much less certain, and in their presence we blunder unless the relation is most carefully considered; and there are a host of minor deviations from the normal in which the relation between the trivial pelvic pathology and the patient's symptoms are problematic to say the least, and in which treatment based on gynecologic diagnosis more often fails than otherwise, because we focus our attention upon the disease and completely overlook the patient.

There is a medical science and a science of medicine, but as yet very little exact classified knowledge of symptomatology; hence our gross mistakes when we operate for pathology and overlook the patient, mistakes which the cults who cannot operate never make, therefore their widespread popularity among those who are looking for relief from their discomfort and care not at all if they are carrying some organ whose condition or position does not conform to our ideals of a theoretic normal.

DISCUSSION

James Percy, San Diego—I only want to discuss one phase of Dr. Skeel's paper and I am so glad he touched upon it because it is the phase that pertains to not only the gynecological practice but all types of practice. One fact so often overlooked in the practice of medicine is the neurological side, the functional side of our patients. I presume it is true that 75 per cent of the women, speaking of them now only, that come into the doctor's office, are so-called neurotics, and unfortunately, I don't care in what specialty it is, the specialist whose office that particular woman goes into is almost bound to do only for her the thing that he has developed and that he knows as his specialty. In other words, the patient as an individual is entirely overlooked, a point so well brought out by Dr. Skeel when he used that phrase "narrow specialism." I don't want to think that any of us are dishonest, but I sometimes see things that make me wonder if we are dishonest, but I think we are either dishonest or grossly ignorant. If we are ignorant in medicine, then we are dishonest. Just think of the number of women who are operated upon and promised relief from some minor things, as the essayist brought out, and then are turned loose and do fine for a couple of weeks while they are wearing out the experience they have had incident to the rest in the hospital, and later come back with all the old symptoms. The next thing we hear is that they have gone to someone else and gotten into the hands of some other specialist and the same thing is repeated.

It is essential to inquire into the early history because of its importance in bringing out the underlying factors of the malady. It is so easy for us to ask questions on the matters that we are most interested in and leave out everything else.

Recently I saw one of the most beautiful records of a highly trained gastro-enterologist. It was a work of art and he wrote it himself on the typewriter, things emphasized with red ink and yet no one had looked into the patient's mouth. You could move every tooth, they were all dripping with pus.

I never believe any word that any patient tells me in describing certain symptoms until I can absolutely convince myself that she is telling the truth because I have seen too many of these women cured by the osteopath, when, in fact, the neurotic element was the sole pathology.

There is little to say in closing; but, like Dr. Percy, I have been tremendously impressed, especially since coming out here, with the danger which the whole medical profession is resting under. I know it is not so grave in the East, but even there the risk it is running from the incursions of every variety of cult is apparent. The strenuous struggle which the profession here is making to keep its head above water has also impressed me, but it is apparent that the profession itself is to blame for many of the evils with which it is confronted. We fail in our methods of handling these minor disorders and swell up with pride over a hysterectomy or some other spectacular operation, but completely forget about the half dozen or so women on whom we have done a curettage or repair of the cervix who return with exactly the same complaints as before. Objectively they may be well, but subjectively they are just where they were before we operated; hence this plea for more accurate clinical diagnosis.

The Difference—Physicians are often criticized for not taking their patients into their confidence, while it is stated that the popularity of the chiropractor is due to his perfect frankness in this regard; from which it would appear that the difference between the physician and chiropractor is that the physician knows what is wrong with the patient but won't tell, while the chiropractor doesn't know what is wrong, but is glad to tell it.—Bulletin of Cleveland Academy of Medicine.

THE MODERN TREATMENT OF THE WEAK OR FLAT-FOOT*

By G. J. McCHESNEY, San Francisco

The subject of arch strain is old and trite, and consequently neglected far too much nowadays in orthopedic literature. With the exception of an article on felt arch supports in the last number of the Journal of Bone and Joint Diseases there has been nothing for a year at least. And this is not because cases of arch strain are becoming infrequent. In the practice of most orthopedic surgeons, as well as in my own, the problem of arch strain and arch support is twenty-five to fifty per cent of the total. Neither does this scarcity of the literature mean that the profession is a unit as regards methods of procedure. The varying types of metal arch supports, as well as those of leather, felt, or what not, compete for our favor with various modifications of heels, shoes, etc. The patient, as a result, goes from one to another device with little satisfaction or relief.

My excuse for reading this paper is to present a plea for a return to physiological and natural methods of treatment. Simplicity is allied to efficiency, but this is too often lost sight of in treating the pronated or weak foot. The symptoms of these conditions are too familiar to require repetition, but let us review facts concerning the anatomy which we all know very well but too often fail to keep in mind.

The internal longitudinal arch of the foot is composed of the inner three metatarsal bones, the three cuneiform bones, the scaphoid, astragalus and os calcis. They are so arranged as to form a curve convexity upward, and highest on the inner side. The summit of this arch or dome is formed by the head of the astragalus, resting upon the calcaneo-scaphoid ligament. This ligament is also called the spring ligament, on account of its numerous elastic fibres, and here lies the burden of my song. The function of the internal longitudinal arch is primarily that of a spring to provide spring and elasticity to the gait, to ease the jar of the impact of the body weight against the ground, but not to bear the whole body weight all the time. The arch, then, is a spring in its action, is the shape of a long automobile spring, and when causing pain due to overstrain from overweighting, should be treated along mechanical rules applied in treating overweighted springs, and nothing else. Does a mechanic in treating a weak or overstrained auto spring put a prop or support in its middle? This would be foolish, for thereby all spring action or function would be nullified. The same rule applies to our use of so-called arch supports. They destroy the spring action of the arch and hence their use is inherently vicious, as no part of our body can be considered as healthy if not performing the function for which Nature intended it. In addition, a deleterious pressure is exerted upon the short flexor muscles and plantar fascia, and causes a pressure atrophy of these structures which retards a return to normal function after this pressure is removed.

The other well-known disadvantage of arch supports I'll not dwell upon—their cumbersomeness, weight, cutting of shoes, etc.

If, then, we should not support our arches by a central prop, what is best to do? To return to our mechanical engineering simile, the first measure is to remove our load or a large part of it; the second is to strengthen the elements of the arch itself, not prop it up. To remove the load, I insist on two things, first, proper posture; second, raised inner sides of shoes. In almost all cases of arch strain, the line of weight passes down the tibiae to the inner sides of the feet. Usually it can be demonstrated to the patient standing, and also to the friends or relatives observing from the rear, that the line of weight passes down to the inner side of the everted os calcis. If the os calcis is everted, the rest of the foot is everted, as it is an axiom in orthopedics that the way the os calcis goes the rest of the foot goes. This, then, means that the greater part of the body weight is upon the inner side of the foot, or the internal longitudinal arch, instead of upon the external longitudinal arch or outer side of the foot, which is almost flat, and is intended to bear the bulk of the weight, leaving the internal longitudinal arch free for its function of a spring. This latter result can be partially brought about by insisting upon the proper posture, i. e. by standing and walking with the feet parallel and not toed out, Charlie Chaplin style, as we have been taught to do by our mothers, teachers, dancing-school teachers, military instructors, etc., from time immemorial. In addition, high-laced shoes, not Oxfords, with the inner sides of soles and heels raised one-quarter inch in average, and three-eighths of an inch in severe cases, are ordered. It is my practice to measure and inspect these alterations myself before the shoes are worn, as cobblers are careless and have to be checked up at all times. The shoes are then tried on and the line of weight-bearing through the foot to the ground again noted, especially from the rear through the os calcis.

These simple measures are usually sufficient to remove the principal load from the overstrained arch. The fault has often been committed of not building up the shoes enough. Very rarely is one-eighth of an inch raise enough. I find one-quarter inch not too much even for children where it is a routine measure, and three-eighths is often necessary in severe cases in adults. Some strain of the peroneal tendons or the external lateral ligament of the ankle-joint may be felt for a few days, but soon disappears. It rarely requires adhesive strapping.

The second mechanical or engineering measure employed is the strengthening of the arch components; which here means exercise to strengthen the muscles and ligaments that hold up the arch. The following are two simple exercises: First, inverting the feet while standing, or balancing upon the outer edges of the feet; and second, rising upon the toes and then slowly coming down upon the outer edges of the feet to the outer edges of the heels. These exercises should be done as often as possible or practicable, and it is always emphasized

* Read before the Section on Orthopedic Surgery of the California Medical Association in Yosemite National Park, May 17, 1922.

that upon the faithfulness with which these exercises are done depends the speed of the cure and the cessation of the need for building up the shoes. There are no new features about these exercises. They are designed, of course, to strengthen principally the Tibialis Anticus and Posticus muscles, which we must agree are the ones principally involved, especially the latter, which exerts a direct upward pull upon the head of the astragalus. As the muscles of the foot are designed to do their principal work while the individual is walking or standing, exercises are of the most value while in the weight-bearing position, and exercises while sitting do not give the arch-supporting muscles enough to do. This is an important point, and explains why exercises while sitting often do little good and, in fact, may tire the legs excessively from the unnatural work the muscles are called upon to do.

With these simple measures immediate relief is afforded to all but the most acute cases of arch strain, and these are really better off in bed till the acute symptoms subside. Arch supports may get them up a little sooner, but far from cured. In fact, the chief mistake in the use of plates, aside from the using of them at all, is the wearing of them far too long. Instead of being provided as a very temporary appliance and to be supplanted by other measures as soon as possible, they are put on as a permanent curative device and no time limit set upon their use. Consequently very soon the patient finds out for himself that he is just as comfortable without arch supports as with them, and not really comfortable in either case—hence not cured.

The softer the material used, the less the discomfort and damage to the arch-supporting structures, but the same inherent objection applies to all, i. e. they do not tend to restore to the arch its proper function, that of a spring. Hence they are not a bit curative and only sometimes palliative.

I have found that this method of treatment applies to the very young as well as to the adult, but sometimes the advanced in years, with arthritis, will not tolerate a changed line of weight-bearing and are better off with soft pads under the arch to distribute the weight on the tender feet, and any idea of restoring the spring action of the arch hardly advisable on account of the age of the patient.

In injuries to the feet especially it is important to strive at all times for a restoration of proper function. In Potts fracture especially, and in all non-ankylosing fractures about the ankle-joint or in the tarsus, the foot should be put up in supination in the splint; that is, in the very position I have been trying to prove is the best one for a weak foot. When the splint is removed, why put a hard metal support under the tenderest and weakest part of the foot, with no provision for removing most of the weight by simply continuing the supinated position in shoes built up usually three-eighths of an inch? The fear that the arch will be strained if no support is put under it is quite groundless if this simple precaution is taken, supplemented, of course, by voluntary exercises along the lines previously described.

In all foot and ankle fractures, where no ankylosis is a result, I have obtained very easily return of function by these measures, and if in these very exaggerated cases of weak foot no so-called arch-supports are needed, why should they be needed in the milder, non-traumatic cases, even though of longer duration?

Of course, cases with a spastic element, peroneal or otherwise, cases of hollow or claw foot, rigid feet, and cases of trouble in the anterior arch so-called, can be included as suitable for this treatment as a secondary measure. I insist on no especial type of shoe, so long as they are high laced, not pointed toes, and have nothing higher than a Cuban or military heel. The more sensible the shoe the quicker the relief goes without saying.

In conclusion, I wish to emphasize that there is nothing new or original in this treatment; it is known to all orthopedic surgeons as well as the principles upon which the treatment is based. But it is all too much neglected, and in its stead there is used too much an elaborate scheme of plaster molds, upon which metal plates are fashioned, to be later modified by hammering, tempering, etc.

Let us get back to simpler methods based upon physiological principles even if our patients make us fewer visits and our pocketbooks suffer thereby.

White Flour—At last public attention is beginning to be focussed upon the shortcomings of white flour. Physicians have known for many years that the excessive grinding, bolting and bleaching processes necessary to secure the beautiful and much advertised white flour, detract very materially from the food value of the final product. However, the propaganda of manufacturers as to the beauties and fluffiness of such flour, as well as the various flour products, has been quite effective in "educating" the public to demand these products. The pendulum is now beginning to swing and the public is getting interested in knowing the facts. Manufacturers of white flour may be expected shortly to launch another "educational" campaign of the kind that creates a desire for white flour or they will be compelled to change machinery and methods and make more of a much better quality of flour.

The New York City Board of Health has recently changed their sanitary code by amendments as follows:

RESOLVED, That Article 9 of the Sanitary Code be amended by adding thereto two new sections to be numbered 141 A and 141 B, to read as follows:

Section 141 A. Bleached flour to be conspicuously marked or labeled. No flour, to which oxides of nitrogen, or nitrous acid, or nitrates, or cholorine, or any other chemical bleaching agent has been added, shall be brought into, or held, kept, sold, or offered for sale in the City of New York, unless the package or container shall be legibly and conspicously marked or labeled with the words "Bleached with....." (giving the name of the bleaching agent used). . . .

Section 141 B. Bleached flour products intended for human consumption to be conspicuously marked or labeled. No product intended for human consumption shall be brought into, or held, kept, sold, or offered for sale in the City of New York, which is made from flour to which oxides of nitrogen, or nitrous acid, or nitrates, or chlorine, or any other chemical bleaching agent, unless the product is legibly and conspicuously labeled or marked with the words "Made from flour bleached with....." (giving the name of the bleaching agent used).

16	*NO. 16. Chiropractic Anti-Health Initiative.* Creates Special State Board composed exclusively of Chiropractors, as special favor to unlicensed Chiropractors, who refuse to take State Examinations provided by present laws of California; grants members of Chiropractic Board power to license themselves, without any examination—upon payment of $25.00, and then issue licenses to reciprocal allies upon similar generous terms. Neglects to define chiropractic but practically presents licenses to unexamined persons to practice this undefined method of treating diseases; destroys value of public health statistics by permitting grammer school graduates of so-called chiropractic "colleges" to report on infectious and contagious diseases and sign death certificates. Vote "NO."	Yes	
		No	X

More Education, Not More Boards

The pernicious Chiropractic measure has been rejected by the California Legislature five times and by the sound sense of the people at two previous elections.

Osteopathic-Chiropractic-Anti-vivisection campaign literature would mislead the uninformed into believing that this is a contest between competitive schools of healing. It is a contest between education and ignorance; between creating irresponsible Boards for the special exemption of special groups or maintaining one Responsible Board to insure competent and impartial administration of the law for the protection of the public.

California has a competent Board of Examiners created by law, charged with the duty of determining by impartial examination the qualifications of all applicants, including chiropractors and osteopaths, who desire to treat diseases, injuries, deformities, physical or mental afflictions of human beings. Examinations are necessary to safeguard the lives and health of the people from incompetents, impostors and quacks. Citizens have the right to expect that anyone the State licenses shall possess a certain amount of knowledge of the causes and courses of diseases and the complex functions of the intricate human machine.

Examinations are open to all qualified applicants. Chiropractors have taken and have passed the examination and are now legally licensed and practicing in California. Any chiropractor who can meet the reasonable requirements of the present State law and pass a 75 per cent examination can receive a license.

To create a new Board for the special benefit of those who are unable or unwilling to take the State examinations is to approve ignorance and license lawlessness.

To create two Boards to do what one Board is doing effectively and economically is extravagant legislation.

Chiropractors and osteopaths constitute only two of the twenty-seven drugless cults of California. If a new Board is created for chiropractors and another new Board for osteopaths it is obvious that the other twenty-five drugless cults are equally entitled to Special Boards. This would result in a chaotic condition constantly menacing the public health.

The California Legislature at five different sessions carefully investigated and considered chiropractic demands for a new Board based upon charges that the present Board of Medical Examiners is incompetent and unfair. Each time the chiropractic charges were found untrue, and the Chiropractic bill was consequently rejected five times as without merit.

Insurance companies, industrial accident commissions, railroad companies, great industrial plants, the Army and Navy, fraternal organizations, who are intelligently interested in protecting the health of their working forces, would release educated physicians and surgeons and place chiropractors in full charge of their medical, surgical hospital service—if—chiropractors had any substantial part of the merit proclaimed in their campaign literature.

The law governing the Board of Medical Examiners has been upheld by our Courts as valid, reasonable and enforceable without one dissenting opinion. The present Board is impartial and able. If the present Board becomes incompetent or unfair the Governor has authority to select a new Board. The courts can review and reverse the Board's decisions. Such a well-selected, responsible Board assures all applicants of impartial and competent consideration and assures the people of California adequate protection.

Vote "NO" on Anti-Health Initiatives Nos. 16, 20, 28.

WHAT THE GENERAL PRACTITIONER CAN DO TO IMPROVE MATERNITY CONDITIONS IN CALIFORNIA

By R. KNIGHT SMITH, M. D.

Statistics have been compiled showing that the care given pregnant women in the United States is below that of some sixteen other nations, as shown by morbidity and mortality rates. How correct these figures are I personally cannot say, although I have the impression, and it is only an impression, that they fall short of rather than exaggerate the conditions that actually exist. However, assuming that the obstetrical care in the United States is markedly below that given in other countries, at whose door does the responsibility lie? The obstetric specialist—the general practitioner—the midwife—or the patient?

I have had a survey of the birth registrations for the year 1921 in the City and County of San Francisco made, submitting the names of all doctors who work in obstetrics and gynecology, either in whole or in part, and who otherwise do not have a general practice, and the following figures have been obtained.

Total number of birth certificates examined	9311
Signed by above-named obstetricians	1343, or 14.4%
Signed by general practitioners	7063, or 75.9%
Signed by midwives	905, or 9.7%

The Bureau of Child Hygiene, replying to a request for information regarding the situation at large in California, reports that of 1000 cases taken at random at Children's Conferences throughout the State there were 829 attended by physicians; 43 by midwives; 2 by nurses; 25 by untrained individuals and 1 unattended.

From these figures I think you will agree with me that the major responsibility with obstetrical care rests upon the general practitioner of medicine. A little less perhaps in the centers of population than in the rural districts. In California the midwife is almost a negligible question, except in the cities, and even there it does not amount to more than 10 per cent.

With this question answered in the affirmative, namely, that the need of improving maternity conditions does exist and that the general practitioner is responsible for the care of at least 75 per cent of the cases in our centers of population to 95 per cent in the rural districts, the next question is what means are being used or could be used to meet the situation? I think this question can best be answered under the following headings:

1. *Educational*—
   - (a) Primary or obligatory medical instruction;
   - (b) Secondary post-graduate or non-obligatory medical education;
   - (c) Education of the patient.

(1a) Primary medical educational facilities have progressively advanced in efficiency during the past generation. The primary educational requirements, the preliminary course of study, the limitation of the number of students, the advance in laboratory methods, the increase of clinical material with the added fifth year of interne service before graduation, have given the public better educated medical service than it ever had from corresponding classes in the past.

(1b) Secondary non-obligatory or post-graduate instruction is desired by the vast majority of general practitioners, but the opportunity for receiving such instruction is not so easily obtained as it ought to be. Much good would be accomplished if it were possible to make short, intense, special courses available for the general practitioner throughout the State, and I look to the so-called extension courses in our Universities as a partial solution of this problem.

(1c) Education of the patient: I am of the opinion that there is no part of our physiology about which there are so many old wives' tales and ignorance on the part of the public as there is about the reproductive functions. On only one phase of this subject has the public a clear idea, and that is with regard to childbed fever. They are definitely sure that a rise of temperature post-partum is an infection, and that it is always caused by the medical attendant, and he is consequently severely criticized when such an event occurs without any regard to its real cause.

During the past two decades the feminist movement has surged rapidly forward and coincident with its development there has been a corresponding increase in the spread of information regarding prenatal care of the pregnant woman, and postnatal care of the child, as evidenced by the growth of popular literature on prenatal care, official and non-official, that is being distributed mainly through the American Child Hygiene Association and the establishment of child hygiene centers by this or similar associations, partly or wholly directed by the efforts of State Health authorities.

The entire nation has been committed to a five years experiment in the so-called Shepard-Towner Act, which commits the National Government to the contribution of a sum of money to each of the States that raises a similar sum to be expended in the studying and spread of information of these two subjects. It would seem almost useless to argue that any means that will increase the knowledge of the people on this subject ought to be employed, but John Fiske, in his admirable history of "The Beginning of New England States," says in effect that there is no danger of our re-establishing a King in this country because men's minds are on guard against it, but there are many forms of autocracy which are just as dangerous to the liberties of the people as a monarchy, and we must be most careful to avoid creating an agency which would tend to undermine either directly or indirectly our form of government, and in my opinion State medicine would do it. Therefore, it behooves us as medical men to see that this movement, instituted as an educational one, shall continue to be educational and not administrative.

2. *Individual Effort*—Cragin, in pointing out the disagreeable side of obstetrical practice, says: "And yet no one should engage in this line of work and no one deserves success in it who is

not willing to respond at once to the call of the woman who has entrusted herself to his care, as it carries with it greater moral obligations on the part of the latter to be loyal to her in every way than do any other engagements in medicine," and to which I add "Amen." In other words, he who engages in obstetric work should have the spirit of service beyond that of any other part of medical life.

I believe the first consideration of this individual effort by the general practitioner should be the organization of his work so that he would be sure to give adequate service to the prospective mothers who place themselves under his direction expecting proper care. The important phase of this organization is first, the spirit to do good work on the part of the medical man—and no amount of training will do any good if the spirit of service is absent. The outward manifestation of it is evidenced by the arrangement and equipment of his place of business (his office) so that his patients will have the opportunity to consult him largely at their own convenience, getting information and direction regarding their condition and its care, the preparation necessary for surrounding the delivery of the patient in her home with sterile conditions, together with the recording of the patient's history and laboratory findings, so important as an impetus to do good work and as self-protection against liability suits.

These things are so fundamental that no matter how small the community they should be carried out because inadequate service is the parent of inadequate pay for this class of cases, and inadequate compensation is largely the reason why the medical profession as a whole looks on this, the most important phase of medical life, as a drudgery which has to be borne to retain the medical work of the family group.

I feel that more attention to medical economics should be given during the period of obligatory medical study in the attempt to keep the young medical man from groping about first one way and then the other before he finds the best methods of caring for his patients.

Having supervised the patient during her pregnancy to term and the problems of the actual delivery at hand, how is the general practitioner to best meet and answer them?

With proper medical equipment and supervision of the pregnancy, the questions are already largely solved by prevention of some complications and providing the "how" to accomplish the desired results when it is determined what to do and when to do it. Just here, by way of parenthesis, may I lay stress on one or two things which have seemed beneficial to my patients during their pregnancy: (1) the limitation of the amount of, particularly, the higher proteid foods, and such vegetables as are followed by the excretion of calcium oxalate crystals in the urine; (2) testing for the reaction of the urine with methyl red solution as suggested by Dr. Martin Fisher several years ago, followed by the use of alkalies when the reaction is acid to that reagent; and (3) the avoidance of over-exertion during pregnancy.

It has seemed to me that these suggestions have given my patients a little less discomfort than they otherwise would have had, and the incidence of toxemia in my private practice has been about one-third the average quoted in our text books.

The phenomena which we call "parturition" is an orderly sequence of occurrences taking place within a more or less elastic limit of time, and any very considerable deviation from the general average is abnormal and likely to be attended by untoward results for either mother or child, or both, whether the labor be too rapid or too slow.

It is difficult to realize that in a physiological function like labor that some kind of operative procedure is necessary to assist delivery of the child in one case out of every four, and it is in the interests of the patient, and reflexly of her medical attendant, to abstain from exposing her to the risk of infection, particularly by the use of vaginal examination and manipulation. Under no condition in a normal labor should one be made prior to the time when the presenting part has passed the pelvic brim, for the reason that if the presenting part does not pass through the pelvic brim delivery by the natural passages will not be accomplished without exposing the patient and her child to grave danger from injuries or infection, or both. In all presentations that fail to pass through the brim after the test of labor my personal preference is for the operation of Caesarian Section to that of forceps or version, giving as it does a lower risk to both mother and child, and where we have avoided infection by not making vaginal manipulation, the operation is attended by little danger.

The demand of the patient to be relieved of the pain of childbirth and our desire to ease the suffering of the patient is the foundation of much of the morbidity and mortality that the women of our country are affected by. The use of drugs, such as opium, twilight sleep, and anasthesia prolong labor and increase operative interference, which is inevitable and is followed by the increase of morbidity and mortality to both mother and child.

No more pernicious doctrine can be taught than that which converts the normal delivery into an operative one, whether incidental to the use of drugs or predetermined by the medical man to merely finish the job, for however skillful one may be they should remember that "boys flying kites haul in their white-winged birds, but you cannot do that when you are flying words," and be careful not to advocate operative means in normal cases because it is not in the interest of their patient, as any operation is followed occasionally by untoward results, and their example will be followed by unskillful men who will have more disastrous results for their patients, with consequent loss to the State in citizenship.

Sheppard - Towner Bill — When the Sheppard-Towner bill was under discussion in Congress it was opposed by the only woman member, Miss Alice Robertson, who said among other things that "it will not help the mothers of America one bit, but will give a lot of jobs for others in the bureaus at Washington."

OBSCURE REFLEX SYMPTOMS OF TEETH, TONSILS AND SINUSES, ESPECIALLY THE SINUSES.

By ROBERT B. SWEET, M. D., Long Beach.

Since the advent of the era of the study of focal infections we have learned to consider lesions of the teeth, tonsils and sinuses collectively. We have learned that they have a common bacteriology and that they can and do produce remote infections in almost any tissue or organ in the body. But there is a tendency to look for gross lesions. By the aid of transillumination and the *X*-ray we search for the darkened areas of the sinuses and the indications of apical lesions of the teeth, often failing to find the more obscure lesions which may not be revealed even by our modern mechanical methods. It is to these obscure lesions which produce marked and intense reflex pain that I wish to direct your attention. In taking up the consideration of the pains and aches produced by lesions of the teeth, tonsils and sinuses, we discover that we have to deal with the common innervations of these structures through the branches of the fifth nerve, which enables us to understand the intricate manner in which they are connected. It is not the aching, decayed tooth; the sinus discharging pus; the hypertrophied turbinates; the impinging deflected septum; or the bulging bullaethmoidalis, so easily discerned by the casual observation that gives us the greatest trouble. It is those obscure lesions which produce much pain that tax the diagnostic acumen of the modern specialist.

Of the familiar reflexes produced by the teeth we well know the facial neuralgias and the lancinating pains, often remote from the site of the offending member. The pains in the eye, the congested conjunctival vessels, the supraorbital pains and aches in and about the ear. The earache caused by an impacted third molar is not an infrequent occurrence.

In looking about for perhaps the most obscure lesion of the teeth producing the greatest amount of disturbance, I have selected the dental pulp nodules. Not being well enough informed upon this subject personally, I have abstracted an article by Norman and Johnson (New York Medical Journal, July 20, 1921), that this paper may be more comprehensive in its scope; and to bring to the attention of the eye, ear, nose and throat physicians this phase of fifth nerve disturbances that should be given consideration in our efforts to solve some of the perplexing problems incident to fifth nerve neuralgia.

Neuralgia, defined in its primary sense, means pain, or a painful sensation of a definite type, limited to the sensory distribution of a peripheral nerve, or nerves. This pain may be referred to the surface distribution of the affected nerve, pressure on the areas of which causes a typical but not severe pain, which we are pleased to term neuralgic in character. In treating the neuralgias, our therapeutic resources are directed to a temporary or permanent relief of the chief symptom, pain. The causes of trigeminal neuralgia are many, and are mentioned for purposes of review as follows: The teeth play a predominant role, perhaps undergoing a constructive or destructive pathological change, or because of a constitutional defect in shape, position or development; affections of the gums, of the jaw bones, the cranial sinuses, and the mastoid, frequently produce neuralgias of the fifth nerve and associated neuralgias that are difficult to differentiate from a regional point of view; diseases of the eye, as iritis, cyclitis, iridocyclitis; diseases of the ear; constitutional diseases, as arteriosclerosis, malaria, anemias, diabetes mellitus (this disease being particularly prone to attack the teeth and gums), syphilis; the exogenous and endogenous intoxications; non-progressive convalescent states following acute infections and surgical procedure with pyogenic complications; the metabolic diseases with their associated endocrine disturbances; tumors of the Gasserian ganglion, of the brain, of bone in the adjacent vicinity or inflammation of the bony structures within the neighborhood of the nerve. Indeed, it may at times be the initial symptom of tabes dorsalis, and Oppenheim cites a case of multiple sclerosis beginning as a facial neuralgia. It is the purpose of this article to emphasize the necessity of excluding the presence of pulp nodules in apparently normal teeth, in all cases of intractable neuralgia, before one hopelessly resigns oneself to a state of helplessness in treating these cases. Pulp nodules in apparently sound and healthy teeth, with little or no reaction to the ordinary tests, are difficult of diagnosis. Pulp nodules, present in decaying teeth, are comparatively easy to detect, and their removal is but part of the operation, extraction or devitalization deemed necessary by the operator for that particular tooth.

Pulp Nodules—Pulp nodules are small masses of calcic material suspended in the pulp substance which, by reason of their progressive formation, effects a mechanical displacement to the point of strangulation, with resultant death of that tissue. They are commonly found in the bulb portion of the pulp, but may occur in the root portion, assuming a number of forms, those in the bulbar portion being round or nodular, while those in the root portion, are fusiform or spindle-shaped. They are more frequently mutiple than single, and it is believed that the larger nodules are formed by the coalescence of the smaller ones.

Symptomatology of Pulp Nodules—There appears to be no relationship between the frequency of occurrence of pulp nodules and the production of symptoms. They do not produce symptoms with any degree of consistency. They may be present and apparently do no harm, and, conversely, their presence may initiate an irritation of the terminal dental nerve filament because of mechanical pressure. It is a reasonable assumption that these nodules should produce symptoms in every case, but the converse is true in the majority of instances, paradoxical as it seems. This discrepancy between cause and effect may be accounted for by their slow formation, permitting the dental pulp to accommodate itself to the change within its tissue, without giving rise to symptoms. However, it appears that when the nodule or nodules become large enough to strangulate or obliterate the pulp tissue, symptoms are produced. The symptoms are the result of mechanical irritation, by the nodule or nodules, to the terminal nerve filament within the pulp tissue. Usually the local symptoms are hyperesthesias, not limited to the particular tooth or teeth affected, but affecting the pulps of all the teeth on that side of the dentures. Black has noted that general pulp hyperesthesia may be the precursor of an acute gouty or neuralgic attack. Unless the nodule or nodules are located and removed, continuous pain stimuli are transmitted by that branch of the fifth nerve supplying the affected tooth or teeth. It is known that if a sensory nerve transmits continuous pain stimuli, fatigue will result. Fatigue is the end result of biological changes, in nerve tissue, necessary for the performance of specific function. If fatigue is prolonged by reason of constant irritation (pain) to a terminal dental nerve filament, neuralgia of the main nerve

trunk results, with reflex neuralgic manifestations in its branches. This explains why the neuralgia does not disappear until some time after the local agent is removed. Time is necessary for a complete recuperation of the nerve itself.

So much for the teeth. As for the tonsils I have but passing comment to make. They have been given a great deal of consideration and their part in the production of pains and aches is quite generally understood. Probably the diagnosis of toxic neuritis covers the greater part of their etiological importance.

The sinuses constitute the most important and interesting division of the subject. I will not take time to enumerate the usual local pains about the antrum, the frontal headache, caused by acute sinusitis. The right maxillary sinusitis may manifest itself by a left supraorbital pain. The occipital and vertical pains and the pounding ears of an acute sphenoidal sinusitis are generally understood. In cases of acute sinusitis it is important not to be misled by the location of the pains, but the physician should seek by every method available to locate the offending sinus, and also make sure that it is only one, because several sinuses are frequently involved at the same time.

Your attention is directed to that class or type of sinus lesions which Sluder has classified in his book on "Headaches, and Eye Disorders of Nasal Origin." The cases showing small pathological changes but severe pain. Sluder's three classifications are the syndrome of nasal ganglion neurosis, vacuum frontal headaches, and hyperplastic sphenoiditis. Before I became acquainted with the contents of his book I was struck by the peculiar symptoms I had observed in a few cases that I had not remembered as being described in my text book. At least they did not correspond to the classical descriptions commonly taught. After becoming interested along this line I searched back through my records that I might ascertain how many of my cases I could place in this category. Of about four hundred cases of sinus trouble of which I had X-ray pictures and case records I was able to select only nine that I felt corresponded to one or the other of Sluder's classes. A clean-cut diagnosis of these conditions is not an easy task and usually the diagnosis is only confirmed by the results of the treatment. Take a case of recurrent intense headache extending over a long period of time often accompanied by vertigo and nausea; with the history of going to bed for three or four days, and finally resorting to a hypodermic of morphine for the relief of pain. When upon examination one finds the septum straight, the middle turbinate normal or slightly atrophied; no impinging areas; no pus or mucous or glarry secretion from any sinus, and transillumination and X-ray negative. And then upon opening of the nasal frontal duct have all the symptoms subside and the patient be relieved from that time on, one is warranted in making a diagnosis of vacuum frontal headaches.

Many of these patients have been seen by many specialists, who in the absence of any noticeable secretion have not made the diagnosis of sinusitis. Many of these patients have suffered for ten, twenty or even forty years and have been relieved by a single operation requiring less than twenty minutes' time. The cases of nasal ganglion neurosis and hyperplastic sphenoiditis are even more obscure, and no doubt if physicians were better trained in diagnosis and had more knowledge of the pathology of diseases of these areas, many more definitions describing more minutely these pathological lesions would be available.

I do not claim that ganglion neurosis and sphenoiditis are not caused by infection, or that they are always free from secretions. The point is that the secretion is not always in evidence. I have examined some patients time and again, finding the mucous membrane perfectly dry, but later on the tell-tale muco-purulent secretion would show up. I have always felt that the action of cocaine in shrinking the membrane acted not only to promote ventilation but also to facilitate the drainage of secretions. It is a fact also that the effect of negative suction or syphonage has had a most favorable effect upon these conditions. The Nichols nasal syphon used at home has a much better effect than the suction treatment in the office. After proper treatment the relief to these patients is so striking that it compensates for all the time and energy required to bring about favorable results.

CASE REPORTS

A man of 64 years of age had had headaches for the past eighteen years. He had consulted various specialists in several large cities, all of whom had suggested the possibility of sinus trouble but none had ever discovered enough evidence to warrant any operative procedure. He had had eight different prescriptions for glasses but was not wearing any of them. The attacks were periodic, occurring about every two weeks. They would begin with a slight dullness over the left eye, accompanied by gastric distress, nausea and ended usually in vomiting. He had long since given up hope of receiving any relief aside from opiates and a rest in bed for several days. His business was necessarily seriously interfered with. At no time during these attacks did he have any discharge from the nose. He was pale, his facial expression was distraught, thoroughly discouraged but willing to have anything done that would afford any hope of relief. He had two X-ray pictures that had been previously taken which showed nothing. But not being content with that I insisted on having another. This picture showed nothing. On examination the membranes of the nose were pale and slightly atrophic. The septum was straight. The middle turbinate hung free. There was no impingement, either against the septum or ethmoidal region. The bulla ethmoidallis was not prominent. There was no secretion, not even glarry mucous present, even after severe suction. The nasal frontal duct appeared patulous. Notwithstanding this lack of anything to warrant operative procedure, I proceeded to excenterate the anterior ethmoid cells, the agger-nasi, at the first sitting. Much to my surprise no pus or mucous was discovered, and only the usual amount of bleeding. This was followed by a marked improvement in the symptoms. The patient became enthusiastic over the prospect of other results. After that, whenever he felt an attack of headache coming on, he would come in, and with a shrinking up of the parts with cocaine and a slight curretage of the cells he would get relief. I became suspicious that the effects were either psychic or due to the soothing effects of the cocaine. Consequently, I frequently omitted the

cocaine and used adrenalin instead, with almost but not quite the same effect. The recurrence of attacks became less and less frequent. About this time, however, after I had felt that I had been dealing with a dry sinus, I began to notice the presence of a thick mucous which would flow down after the treatment and with the aid of suction. The patient also would tell me that he would often expectorate mucous an hour or two after the treatment. This fact has led me to question the existence of the so-called dry sinusitis.

Woman, age 32, three years ago began with periodic headaches, which gradually increased in intensity until they became severe enough to put her to bed for a period from three or four days to a week. She had been thoroughly examined and given a variety of treatments, including milk diet and rest, endrocrines and glandular extracts. But to no avail. Her eyes had been refracted. Sinuses and teeth had been examined by the X-ray. The sinuses had been examined by several physicians and pronounced negative. The patient's headaches were accompanied by vertigo, nausea, and even periods of delirium, often requiring opiates for relief. During the interval between attacks she was perfectly well and comfortable. On examination the nasal passages were entirely free from any signs of secretion, congestion or impingement. The possibility of frontal vacuum sinusitis was considered and a frontal sinus opened, but to no avail. At a secondary sitting the ethmoids were opened. Still no results. Finally, the left middle turbinate was removed, and the sphenoidal atrium exposed to view. There was a very small opening, hardly large enough to admit of a small probe. The orafice, however, presented a puckered appearance. The sphenoid was opened and the atrium enlarged. No discharge followed. This resulted in modifying the severity of the next attack very remarkably. Since then the attacks have become much less frequent and much less severe, until it has been possible to keep them entirely under control by local treatment of cocaine to the atrium, which is prone to close even after free opening has been made with a punch. There has never been any evidence of mucous or pus.

CONCLUSIONS

In searching for the cause of reflex pains of the fifth nerve and its connections through the sphenopalatine ganglion we should consider the teeth, tonsils and sinuses collectively.

The most intense reflex disturbances are often found in patients where the smallest amount of pathological changes are present. The study of this subject suggests that there is still much to be learned about reflexes of the fifth nerve.

Fadism in Medicine — No doctor will be held guiltless who attempts to practice medicine without being familiar with, and willing to utilize, the various approved, auxiliary methods for making a diagnosis.

Likewise, no doctor will be held guiltless who allows his interest in, and enthusiasm for, one special trick to overshadow discretion and blind his perspective. As important as is the test-tube, microscope, and X-ray, a stubborn dependence on their findings alone would often be suicidal and homicidal.

Doctors are human, and it is a trait of humans everywhere to follow fads which often lead to extremes, but certainly no profession and no class of humans need, more than doctors, to sit steady in the boat and make haste slowly.—Editorial, Southern Medicine and Surgery, August, 1922.

PHLORIZIN GLYCOSURIA IN THE DIAGNOSIS OF PREGNANCY *

By MERRILL W. HOLLINGSWORTH, M. D.
(From the Johnston-Wickett Clinic, Anaheim, Calif.)

A review of the attempts to formulate some method of diagnosis of pregnancy by laboratory methods convinces that the necessity for such a test has been felt for some time. Although the menstrual history gives presumptive evidence of the existence or non-existence of pregnancy, we are all familiar with the occasional patient who menstruates several times after becoming pregnant, or even throughout the gestation period. The patient with a history of irregular menstruation before marriage presents an equally perplexing problem. And sometimes the question arises whether the diagnosis should be fibroids alone, pregnancy alone, or fibroids and pregnancy. In such cases a dependable test for pregnancy would be of inestimable value.

Bar and Ecalle, in 1919, named as reactions specific in pregnancy the complement deviation, Abderhalden's dialysis, and the intradermal reactions. To these may be added the epiphanin and cobra-venom reactions and the renal glycosuria, epinephrin glycosuria and phlorizin glycosuria tests.

The laboratory work on which this report is based is limited to the phlorizin glycosuria test, which, like the renal glycosuria and adrenalin glycosuria tests, depends on the occurrence of glycosuria during pregnancy, first noted by Blot, in 1856, later by Duncan, in 1882; the frequency of its occurrence is stated as 86 per cent by Hofbauer, 75 per cent by Payer, 5.75 per cent by Williams, 70 per cent by Stolper, 68 per cent by Berg, and 4 per cent by Cron. Klemperer, in 1896, suggested that the glycosuria of pregnancy may be due to a lowered permeability of the kidney for sugar. Hofbauer, in 1899, considered it due to functional derangement of the liver; in 1911, he undertook to prove this by tests of the liver function and histologic studies. Lenhartz, in 1908, stated that it is relatively harmless. Cristalli, noting that Schroder, Reichenstein, Falk and Hesky, and Bartels had reported a large percentage of levulosuria in pregnancy, supported Hofbauer's hypothesis, as did Sachs, Strauss, and Sebatowski. The investigations of Hynemann, Landsberg, and Heinrichsdorff, however, disproved Hofbauer's hypothesis. They showed that in cases of any derangement of the liver there is some degree of eclamptic toxemia. At this point in the history of the subject blood sugar determinations were applied to the problem. Benthin claimed that the blood sugar during pregnancy is normal or subnormal, a fact corroborated by Novak, Porges and Strisower, Frank, Jacobsen, Mann, and Bergsma. Reichenstein, and later Stolper, considered the glycosuria of pregnancy to be due to a disturbance of ovarian function. The latter undertook to prove his contention by animal experiments, in which he demonstrated that hypo-function

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of the ovaries is accompanied by a decreased glucose tolerance, and a hyper-function by an increased tolerance. Von Jaskch, Lanz, Hofbauer, and Payer showed that the glucose tolerance in pregnancy is lowered. Bergsma stated that the glycosuria of pregnancy is not dependent on any derangement of liver function, but upon a physiologic hyper-function of renal epithelium. Hirschfeld, in 1910, stated that glycosuria of pregnancy is not related to true diabetes mellitus, and Shirckauer, in 1912, pointed out the important differences between the two conditions. Caldwell and Bibbs suggested that the glycosuria of pregnancy may be due to a phlorizin-like substance circulating in the blood. Novak, Porges and Strisower, in 1913, showed that the glycosuria of pregnancy is due to an increased permeability of the kidney for sugar, glucose, lactose, and levulose, and is not accompanied by a rise in blood sugar. Their work eliminated the possibility of derangement of the liver and proved Klemperer's earlier theory.

Frank and Nothmann produced glycosuria in women two to three weeks pregnant by the ingestion of 100 gm. of pure glucose; specimens of urine were withdrawn every fifteen minutes and tested for sugar. In pregnant women sugar appeared in forty-five minutes and was slight, never more than 0.9 per cent. Blood sugar determinations were made before and during the test. The authors stated that in non-pregnant women the test is consistently negative. In thirty cases, pregnancy was demonstrated in the first three months. They concluded that it is sufficiently accurate to be applied to the diagnosis of early pregnancy. Nurnberger, in 1921, in a discussion of the results obtained by Frank and Nothmann, stated that the possibility of hepatic disease, thyroid intoxication and latent diabetes must be eliminated. He repeated the experiments of Frank and Nothmann and substantiated their findings; however, he stated that this type of glycosuria disappears after the third month. Seitz and Jess, in 1922, reported that they had produced glycosuria by the ingestion of 100 gm. of glucose in fifty women from two to eight months pregnant, with a rise in the blood sugar curve to physiologic limits. McWallis, in 1921, administered 50 gm. of glucose to pregnant women and found that the blood sugar curve in pregnancy is identical with that of hyperpituitarism. The epinephrin glycosuria test was originated in 1922 by Roubitschek. The patient ingests only 10 gm. of glucose in 200 cc. of tea, and thirty minutes later receives hypodermically 0.5 cc. of 1-1000 epinephrin solution. This test, like Frank and Nothmann's simple glycosuria test, is not absolutely diagnostic, but accredited by the author as a valuable addition to the early diagnosis of pregnancy.

Kamnitzer and Joseph, in 1921, reported their results from the use of phlorizin in the diagnosis of pregnancy. Their work is based on the production of some type of "renal diabetes" by the injection of phlorizin, a fact discovered by Von Mering, in 1886, and later studied by Lusk, Halsey, Kraus; Lusk, Reilley and Nolan; Stiles and Lusk, and many others. There seems to be some doubt whether the term "renal diabetes" should be applied to phlorizin glycosuria. It is a form of glycosuria in which there is no change in the content of blood sugar; the glycosuria results from a lowered permeability of the renal epithelium for blood sugar. This allows the sugar normally present in the blood to filter through the kidney, so that the blood sugar is actually diminished.

The procedure employed by Kamnitzer and Joseph consists of the injection of 2.5 mg. of phlorizin intramuscularly, and analysis for sugar of the urine passed thirty minutes later; 30 mgm. of phlorizin is dissolved in 30 cc. boiling distilled water and 2.5 cc. of the resulting 0.1 per cent solution is injected while still warm. This amount is one-tenth of that calculated to produce glycosuria uniformly in the normal person; so small an amount is supposed to be sufficient to produce glycosuria in the pregnant woman, since the patient already is on the borderline of renal diabetes. Kamnitzer and Joseph employed in their analysis Nylander's sugar reagent which makes use of a bismuth reduction instead of the usual copper reduction, and is very much more sensitive than the copper reagents. They reported all pregnant women to give a positive test, not stating how many were tested, 10 per cent of seventy-seven non-pregnant a positive test, and all men (ten in their series) a negative test. The positive test may be obtained two weeks after conception, they stated. Their conclusion was that a negative test excludes pregnancy.

Author's Series—The Kamnitzer and Joseph method of diagnosing pregnancy has been applied in a recent series of fifty-four cases in the Johnston-Wickett Clinic, consisting of twenty-eight non-pregnant women, nineteen pregnant women, and seven men. The decisive results of the originators have not been obtained. The apparent wide variations in the susceptibility to phlorizin, as judged by the depth of the black precipitate in the bismuth reduction, was striking. In this series some of the most positive tests were in men and non-pregnant women; 21 per cent of the non-pregnant women and 28 per cent of the men gave positive tests. Besides, negative tests were obtained in two of nineteen pregnant women, leaving positive results in 90 per cent in pregnancy. The test was repeated on one of the men with a positive reaction with only 2 cc. of the solution (2 mgm. phlorizin), and a positive test was obtained again. Three of the six positive tests in non-pregnant women were obtained by the use of only 2 cc. of the solution. The two negative tests obtained in the pregnant women were with 2.5 cc., one during the third month, the other during the fifth month of pregnancy. In carrying out the test, comparison was made of the urine before and after the injection of phlorizin by the use of control specimens from the patient, since the small amount of sugar normally present in the urine gives some reduction. The conclusion concerning the phlorizin method of diagnosing pregnancy in this series

was, therefore, that it is simple and easily applied, but greatly lacking in dependability.

DISCUSSION

John Vruwink, Los Angeles—The history of the patient and bimanual examination are still the only ways we have of diagnosing pregnancy. I am sure any one practicing obstetrics would welcome any procedure that would make definite a diagnosis of pregnancy, not only when there is a question of fibroids. Some definite method that would tell us whether or not a woman is pregnant would surely prevent a certain number of operative procedures incidental to a wrong diagnosis. Any efforts that are made to find this definite method are of great value. Whenever a procedure is first brought out, certain definite conclusions are drawn. For instance, Abderhalden's test for pregnancy when first published was rather definite in its conclusions, but since then has been shown to be unreliable. The work of Hollingsworth certainly proves that there is no definite method that permits us to conclude whether a patient is or is not pregnant.

Abderhalden's test is so far the best known method, but the very complexity of that procedure itself puts it into the hands of a few specialized workers and consequently is not available to the practitioner at large. The shortcomings of Abderhalden's test in the presence of various other conditions are well known. It is a fact that the urine of pregnant women contains one or the other type of sugar at certain periods. This occurrence has been estimated to vary from 40 to 80 per cent. Whether the increased permeability of the kidney of pregnant women to sugar will be of value in utilizing it as a diagnostic procedure is questionable. It seems to me that any deductions that can be made from the increased permeability will be relative because it is never known in a particular pregnant woman what her sugar tolerance may be. It is questionable in my mind whether the ingestion of glucose or the epinephrin glucose method will result in any definite advantage, although it will be well worth while to make further observations.

M. W. Hollingsworth, closing—The Abderhalden dialysis test has been found so unreliable that there is considerable contention as to its value, not only in the diagnosis of malignancy, but in the diagnosis of pregnancy as well. Van Slyke, Vinograd, Villchin and Loseę developed a refractormetric method for the determination of serum protease with the particular object in view of applying it to the Abderhalden reaction. This is highly accurate and eliminates to a very great degree the subjective element. They found the serum of nonpregnant women showed as much ferment activity on placental albumin as the serum from pregnant women.

However, those tests based on the tendency of women in pregnancy to develop a type of renal glycosuria offer us more hope. It is from these that we may look forward to the discovery of a dependable laboratory test for pregnancy.

(Since the reading of this paper Joseph reports using only 2 mg. phlorizin and positive tests only in first three months of pregnancy. E. Schilling and M. Goebel, using this modification, find febrile patients give positive tests. Sachs finds the test of only doubtful value (14 per cent of pregnant women giving negative tests). J. Hofbauer reports further studies on alimentary glycosuria in the diagnosis of pregnancy. Bathe, and also Hollauer, report good, but not absolute, results with Frank and Nothmann's test. K. Hellmuth reports that the phlorizin and adrenalin tests must be discarded. He obtained better results with Frank and Nothmann's test.—Author.)

A SURGICAL STUDY OF ARTERIAL DECORTICATION *

By C. LATIMER CALLANDER, M. D., San Francisco
(From the Department of Surgery of the University of California.)

In 1918 Professor Halsted interested me in what was then the comparatively recent work on peri-vascular surgery reported by René Leriche of Lyons, France. In a long series of papers, Leriche has called attention to periarterial sympathetic nerve plexuses, and he specifies that certain definite clinical results follow the excision of these structures in the treatment of different clinical syndromes.

The surgical removal of these structures, an operation called by him "Sympathectomy," was conceived, proposed and accomplished in 1889 by his teacher, Jaboulay, who performed it with curative results on the femoral artery in certain perforating ulcers of the foot, and to a less successful degree on the coeliac trunks in visceral disturbances, the nature of which has not been ascertained.

TECHNIC OF THE OPERATION

Leriche has designated his operation as an "Arterial Sympathectomy," according to the arterial level at which it is performed—axillary, brachial, iliac, femoral, etc. The main arterial trunk is exposed by an incision 10 or 12 cm. long at a point a considerable distance proximal to the portion of the extremity which is affected. For example, the brachial artery is the operative site of election for disturbances in the forearm and hand, and the common or superficial femoral arteries in the foot or leg.

The external fibrous sheath covering the artery is divided over the length of the incision, and the artery, with its inner, more intimate sheath and adventitia, is now exposed. This inner sheath, which is fused with the adventitia, is grasped with tissue forceps and is incised directly on the vessel wall. Traction is maintained on one of the lips of the sheath of filmy tissue thus isolated, and this structure, containing for the most part adventitia, is completely freed from the artery throughout the wound with a knife or fine scissors.

Certain objective reactions in the hands of Leriche and his compatriots have been said to follow, and be consequent upon this decortication. During the course of the operation the arteries are progressively reduced in size to a third or half of their normal volume. Following this constriction there occurs a peripheral vasodilation, which is evidenced by a rise in surface temperature over those parts distal to the operation. A third reaction, which he notes as constantly following the operation, is a rise in the systolic pressure over the affected extremity.

CLINICAL PICTURES OF THE DISORDERS CURED BY LERICHE

We cannot fairly compare our results with those of Leriche, since our patients do not correspond in their clinical pictures to those in whom he obtained such spectacular results. In his hands arterial decortication afforded relief in a number of clinical syndromes, most of which he considers

* Read before the Surgical Section, California Medical Society, Yosemite National Park, May 17, 1922.

have, as a common feature, a condition of disturbed vasomotor balance.

1. *Traumatic Disorders of Babinski-Froment Type*—The disorder described by these men develops after minor injury to the soft parts of the limbs and is one in which the severity of the lesion is out of proportion to the intensity of the symptoms. Clinically, the disease is described as presenting a definite syndrome which includes contractures and pareses developing almost immediately after traumatism.

2. *Causalgia of Weir Mitchell*—Another rare but well-recognized disease which has yielded to this operation is the causalgia of Weir Mitchell. This syndrome in essence is a painful form of neuritis of the median nerve, and was described by him during the Civil War, and is so named from the Greek, meaning "I burn." Its causative factor is trauma, and the predominant symptom, pain.

In considering the mechanism of causalgia it is probable that we are dealing with a clinical picture caused by trauma to the sympathetic fibers accompanying the median nerve which supply the glands, capillaries, and nerve endings of the different layers of the skin.

3. *Results of Excision of Obliterated Arterial Segments*—In limbs affected by traumatic arterial obliteration, a variety of vasomotor, motor and sensory disturbances ensue. At operation an impermeable fibrous cord or the remains of scar tissue is found in which the artery cannot be recognized. Following the removal of this obliterated arterial segment, however, Leriche has noted marked improvement, and he concludes from his results that such an obliterated cord is not an indifferent structure, but a real nerve whose functions are perverted because of injury to its perivascular nerves.

4. *Spontaneous Ulcers in Amputation Stumps*—Certain ulcers which occur in amputation stumps in areas over which there is no pressure from apparatus, and which are definitely not caused by infection, are very refractory in their treatment. The stump in this condition is cold and oedematous, and any granulations present are very friable. Following decortication of the superficial femoral artery several of these ulcers have closed promptly and their scars have remained resistant enough to bear the use of apparatus.

FUNDAMENTAL DETAILS OF THE AUTONOMIC NERVOUS SYSTEM

Since Leriche states that both the mechanism of production of these lesions and that of their cure rests upon involvement of, and operative action on, the sympathetic fibers going to the affected parts, it is fitting before continuing that we review the fundamental physiologic and anatomic bases governing the course of the structures.

For this discussion a general scheme must be borne in mind, both since the facts which have accumulated are so numerous, and that results published on trivial evidence and faulty premise serve only to obscure the issue.

The autonomic nervous system of which the sympathetic fibers are but a part, includes the motor nerves which control the activity of the unstriated and cardiac muscle tissue and all glandular structure, and its four divisions take their origin in nerve cells in separated portions of the central nervous system. Excluding the three groups of mid-brain, bulbar, and sacral autonomic fibers from the scope of this paper, our interest is centered in the sympathetic division of this great system. The cord cells of the sympathetic autonomic division lie in that portion of the spinal cord from the first thoracic to the second or third lumbar segments, inclusive.

Nerve Unit of the Sympathetic System—To appreciate properly the peripheral course of the sympathetic fibers with which we are concerned in this discussion we must be familiar with the nerve unit of the sympathetic system. In common with the other divisions of the autonomic system, this working unit consists of a central and a peripheral neuron. The central of these neurons in any given segment has its nerve cell in that cord segment, and this cell sends out from the cord a medullated axon by way of the anterior root of the corresponding spinal nerve. Outside of the cord this medullated axon, in company with many similar axons, emerges from the anterior root and ends in one of the ganglia of the sympathetic system. This axon, then, is called the "pre-ganglionic" fiber of the sympathetic unit. We have said that this axon leaves the anterior root, and it does so in company with many similar axons from similar cells in the same spinal segment. As these fibers leave the anterior root they form a nerve trunk connecting this root with the sympathetic ganglion, which trunk is called the "white communicating ramus," white since this group of pre-ganglionic fibers are medullated.

The "sympathetic ganglia," about whose nerve cells these pre-ganglionic fibers ramify, consist essentially of the nerve cells of the peripheral sympathetic neurons. The peripheral non-medullated axons of these cells are known as "post-ganglionic fibers." These axons likewise are grouped into a trunk of fibers which connect the lateral sympathetic ganglia with the spinal nerve roots, and this trunk is the "grey communicating ramus," grey since it contains for the most part non-medullated post-ganglionic fibers. The characteristic common to all of the lateral sympathetic ganglia is that the nerve cells there contained send their post-ganglionic fibers, at once or eventually, back to the cerebro-spinal nerves, thence to be distributed to the body wall and the extremities.

Course of the Sympathetic Fibers to the Skin of the Extremities—When the post-ganglionic fibers destined for the skin re-enter the spinal nerves they are distributed to the periphery in the cutaneous branches of these nerves and not along the main arteries of the part, a fact of dominant interest in this discussion. While it has been generally believed that some sympathetic fibers make their way to the periphery along the sheaths of the arteries, definite proof that they follow this course has not been adduced. There is, however, this point to be borne in mind, that the sympathetic system does send fibers direct to the aorta, and that these fibers appear to spread some distance along the larger arteries. It is not unlikely that these nerve fibers cause some contraction in

the walls of these vessels, and that in this way a modification of the blood supply to the skin and muscles may take place without any direct action on the walls of the peripheral vessels.

Bearing in mind that this operation in Leriche's hands has brought about vascular dilation distal to the operative site, we have selected patients in whom we thought this peripheral vasodilation, bringing an increased blood supply to the part, might bring relief. In this series we have performed ten arterial decortications on six patients, on one of whom three arteries were stripped for disease of three extremities, and on another two arteries were stripped for trouble in two extremities.

We have preferred to make no clean-cut diagnoses in these patients, but have chosen to place them into three groups. In the first group we shall consider those in whom the arterial changes before operation were thought to be spasmodically contractile in their nature rather than permanently obliterative. In the second group will be mentioned those in whom an obliterative arteritis had seemed to play the predominant role. The third group is that of unaccounted-for pain, in which we have but one case.

CASE REPORTS

Group I

Case 1—(E. H.), male, age 38. For twenty years patient has suffered from vascular disturbances, which brought him to the hospital with severe gangrene of an amputation stump below the left knee, gangrene in various stages of progress in the left hand, and changes threatening gangrene in the Chopart amputation stump of the right foot. Amputation of the left leg in the upper third of the thigh was immediately necessary as an emergency measure.

Operations and Result: (First Operation)—A decortication of the left brachial artery was performed in the hope that the gangrene in the left hand would be arrested. Present reports (six months later) show that the patient is having no further gangrene in this hand, but that the subjective symptoms have not improved. (Second Operation)—Decortication of the right common femoral artery and a portion of the superficial femoral artery (Dr. S. Hyman) resulted in no improvement in the condition of the right foot.

Case 2—(P. O.), male, age 47. For four years the patient has had pain and vasomotor disturbances of the most severe character in both feet and lower legs, together with pain and excessive hot and cold sensations in the left hand and forearm. Soon after the onset of the pain and violent skin discoloration, a deep ulceration developed over the mesial surface of each great toe. These two ulcerations, together with the other objective and subjective reactions, have been proof to all manner of therapy over this period of time.

Operations and Result: Decortication of both superficial femoral arteries and the left brachial artery have had no effect on the painful symptoms. The ulcerated areas, however, have both healed into resistant scars and have remained healed over a two months' period.

Case 3—(E. D.), female, age 63. For twenty-three years the patient has suffered from vascular changes in her extremities until the time of her admission into the hospital, when she presented serious gangrenous lesions of the fingers of both hands, the condition of the left hand being the worse.

Operation and Result: The left brachial artery was decorticated and the operation was followed by a diminution in the pain and hyperaemia of the hand, which lasted over several weeks. At the expiration of this time the condition became as before and three fingers of the left hand were amputated because of ascending gangrene.

Group II

Case 4—(C. E.), male, age 63. The patient has suffered for several months with pain in the calves of both legs and pains in the feet. Pulsation could not be obtained in the posterior tibial or the dorsalis pedis arteries of either foot, while on the dorsal surface of the terminal phalanx of the middle toe of the left foot was an ulcerated area which extended to the bone. This ulceration was spreading and becoming gangrenous.

Operation and Result: Decortication of the left superficial femoral artery (Dr. A. R. Kilgore) was followed in several weeks by a complete healing of the ulcerated area and a disappearance of the pain. At present, more than a year later, there is a resistant scar over the area and the patient is doing hard work without handicap.

Case 5—(N. F.), male, age 67. During past two years the patient has suffered with a progressive obliteration of the arteries of the lower extremities, until at time of examination no pulsation could be demonstrated below the internal iliac arteries.. An excruciating pain in the left leg and foot, which extends into the groin, was present almost constantly.

Operation and Result: Decortication of the superficial femoral artery resulted in no improvement in the symptoms or the objective reactions.

Group III

Case 6—(C. C. K.), male, age 28. A young mechanic gouged out a portion of the mesial aspect of the terminal phalanx of the right thumb. Following healing a lancinating pain developed in this thumb and the index finger, and removal of the scar together with alcohol injection of the nerve to the thumb were of no avail.

Operation and Result: Decortication of the right brachial artery was followed on the following day by disappearance of the pain. Several weeks later, however, a second pain occurred in the volar area of the flexor muscles of the forearm, and this pain, which persisted over months, has now disappeared.

We wish to state here that we have operated upon no patients who correspond in their diagnoses or clinical pictures to those treated so successfully by Dr. Leriche, and it would be obviously illogical to pass too hasty judgment on this operation on the basis of the results of cases in our hands. There are, however, certain fundamental principles wherein we differ with Leriche. The point of primary importance is to gain the proper conception of the path of the vasomotor fibers to the extremities. After careful study of Leriche's work, one reaches the conclusion that he considers the majority, if not all, of the vasomotor fibers to the extremities follow the sheaths and lie in the adventitia of the larger arteries. We find, however, that anatomists and physiologists concur in the belief that they accompany, and are embodied in, the spinal nerves which run to these parts. If such be the case, the sympathetic vasomotor fibers must leave these spinal nerves at different levels in their course and supply innervation to the arteries from point to point as this innervation is required, and not hold to a continuous course along the arteries. It is a gratuitous assumption, then, that the continuity

of these fibers may be severed, irritated, or otherwise interfered with by a removal of a thin sheet of tissue from the body of an artery. So far as physiologists have been able to prove, the only sympathetic fibers which accompany the large arteries to their termination are those which run from the pre-vertebral ganglia to the thoracic and abdominal viscera.

There arises, too, the natural question as to whether sympathetic fibers of more than minor importance are removed at the time of operation. Difficult points in the staining of nerve fibers of the tissue removed at operation necessitate further work on this subject. It is rather striking, also, that in our cases, save in one instance, we were unable to demonstrate any post-operative rise in blood pressure or increase in surface temperature.

At this writing, then, we are forced to the conclusion that an insufficient number of observations of this operation have as yet been made, and that it is only by careful physiologic estimations of capillary, surface temperature, and blood pressure changes that a proper conclusion can be reached. In terminating this paper, however, we cannot overlook the fact that marked improvement and possible cure in several otherwise hopeless conditions have resulted from this procedure, even though the mechanism of the production of the diseases, as well as that of their cure, is as yet unexplained.

(240 Stockton Street)

Hospital Work of the A. M. A.—At the meeting of the American Medical Association in 1920 the House of Delegates placed all the Association's work with hospitals in charge of the Council on Medical Education and Hospitals.

For the tremendous work that needs to be done for the improvement of hospital service, no organization occupies a position more advantageous than the American Medical Association with its various State organizations. The work of the Association with hospitals must take all institutions into consideration, and the Council is planning to establish a list, not only of those approved for intern training, but also of those approved as non-intern hospitals. The standard applied to intern hospitals is being modified so as to apply to both groups. It is becoming increasingly important that every community be provided with adequate medical and hospital service. So much depends on the future development of hospitals, therefore, that the members of each State committee should be selected with special care. It is urged that a permanent committee be established in every State consisting, preferably, of three members serving for a term of three years, the first committee being so appointed that the term of one member will expire each year. . . .

We wish to mention especially the splendid cooperation received from the State hospital committees, which respond fully and promptly whenever requests for information or inspection are made. In a few States, notably California, Washington, Missouri, and Ohio, and to a greater or less extent in other States, the committees have been particularly active, and even aggressive, visiting hospitals and assisting in problems of staff organization or community relationships when requested by the hospital. In fact, the State committee organization throughout the country is now capable of being called into action to perform any important work, and with a thoroughness hardly to be expected of voluntary committees.—Report of the Council on Medical Education and Hospitals of the A. M. A.

IRON CITRATE REACTIONS

By F. F. GUNDRUM, M. D., Sacramento

Some years ago, Gay and others described the intravenous injection of dead typhoid bacilli into patients suffering from typhoid fever and showed that in a certain percentage of cases the course of the disease was greatly modified following the sharp reaction, chill, fever, sweat and leucocytosis which followed this procedure. Later it appeared that this reaction was in no wise specific and the same course of events could be produced by intravenous use of many foreign proteids. Latterly the parenteral injection of various foreign proteids has been used therapeutically in many conditions with notable benefit in chronic arthritides and some chronic skin lesions.

The following case is of interest because: first, the reaction was produced by a non-proteid substance; and, second, the subsequent course of the disease was modified.

CASE REPORT

Mrs. O. aged 30, admitted to the White Hospital at the end of the first week of typhoid: W. B. C. 4,000; Widal positive. This patient, only recently from Japan, evinced a great distaste for the usual typhoid dietary, especially sweets and milk. The only food she would take was rice gruel, upon which she became, as the disease progressed, exceedingly emaciated and anaemic. On this account, iron citrate, grs. ¾, was ordered to be given hypodermatically. The first dose, on the forty-eighth day of the disease, was followed by a chill, elevation of temperature to 102, pulse corresponding. On this day we were unable to explain the chill; physical examination gave no clue to its cause. Upon the two following days the nurse forgot to give the iron citrate. Upon the fifty-first and fifty-second days the same dose given hypodermatically was followed by a chill, rise of temperature to 104 and 105, with rapid defervescence. The iron citrate was discontinued. The temperature curve, which previously to these reactions had shown an afternoon elevation to between 100 and 101, remained at 99 or below until the patient left the hospital cured.

The iron citrate preparation used was of a well-known standard make, perfectly clear, and the remaining ampoules in the same box were used upon another patient without producing any reactions. Though it is impossible to say that there was no proteid in the ampoules used, its presence is in the highest degree unlikely.

(Capital National Bank Building)

Psychology—"The word 'psychology' is shamefully overworked and misused. For several years it has been the prey of charlatans, four-flushers, bluffers and ignoramuses until at sight or sound of it we are more likely to be disgusted than interested. There seems to be no end of magazine articles, books, lectures, and advertisements on the psychology of religion, psychology of advertising, psychology of adolescence, psychology of dreams, psychology of the strike, psychology of salesmanship, psychology of health, psychology of childhood, and the hundreds of other similar vague titles that force themselves upon us. The climax certainly has been reached, however, in the now prevalent question, 'What is the psychology of this situation?' or, 'The psychology of this act?' or, 'The psychology of that man?' these questions being offered merely for the sake of conversation, just as we will talk about the weather."—(Journal of Iowa State Medical Society, August, 1922.)

THE PHYSICAL BASIS OF DEEP ROENTGEN THERAPY*

By FRANK RIEBER, San Francisco.

In handling the subject of deep roentgen ray therapy from the physical standpoint, only one biological factor really needs consideration. The balance of the subject may be treated strictly as a problem in engineering and physics. Therefore, in this paper I wish first to state my biological basis and, second, to give as simple a physical explanation as possible of the laws governing the generation, transmission and absorption of roentgen rays intended to accomplish certain predetermined results biologically.

Generally stated, the biological factors are: (1) Any living tissue, if exposed to a small quantity of Roentgen radiation, is stimulated to a condition of greater activity. (2) If the amount of roentgen rays delivered to this tissue is increased, the activity of the tissue is not stimulated further, but on the contrary is inhibited or restrained. If the amount of radiation is further increased, this inhibition will eventually reach the point of actual tissue destruction. All types of tissue do not respond at the same rate to the same dosage of X-rays. In this fact lies the basis of roentgen therapy—namely, to apply a dosage to a certain selected portion of the human body which will accomplish a certain result, and yet *not* to cause damage to other portions of the body which it is not desired to affect. For example, if we wish to treat a tumor or malignant growth some distance below the surface of the body, we may direct a beam of X-rays toward this tumor, and a certain fraction of the energy in this beam will actually be delivered to the tumor and absorbed in it, and an effect in the tumor will be produced thereby. However, any beam of X-rays directed at the body acts to some extent on all tissues that it strikes. Further, the effect of this beam is strongest on the first tissue it encounters, and becomes progressively weaker as it proceeds through the body. Under these circumstances, the skin in the typical patient we are considering will absorb a greater proportionate quantity of the beam of rays than will the layers of tissue beneath the skin, and a much greater proportion of this beam than will be absorbed by the tumor. We are therefore confronted with the first limitation to our treatment. *We must limit the total energy* in the beam so that the skin of the patient does not have delivered to it and absorbed in it more than a certain total quantity of energy which we will designate as the "safe skin dosage."

The second consideration in our problem is that we wish to *deliver the maximum possible quantity* of the total radiation in our beam at the point where we desire to produce an effect with this radiation—that is to say, at the tumor itself. Combining these two conditions, we can state our complete problem—we wish to *deliver the largest permissible quantity* of roentgen rays into *a tumor without exceeding the safe limit* of radiation in any other part of the body.

Now, let us consider the X-ray, to see how its laws of generation, transmission and absorption fit it as a tool for the purpose we wish it to accomplish. First, the much discussed matter of the voltage or "spark gap" at which an X-ray tube can be excited, with relation to the effect we can produce with the X-rays. Any X-ray tube in action sends out a large and varied assortment of X-rays—all of them having different qualities. Some of these rays are able to penetrate rather deeply in the tissue before they are completely absorbed. Others are more readily absorbed and will produce no appreciable effect at a very slight depth below the surface of tissue. The best that we can do, therefore, is to state that at any given voltage or "spark gap" applied to the X-ray tube, we will generate X-rays whose *average ability* to penetrate tissue bears a *definite relation* to the voltage, or "spark gap" at which they were produced. This average penetrative ability increases with an increase in voltage.

To employ the rays from an X-ray tube for deep therapy, we find it expedient to use only those rays from the total assortment generated by the tube which have a relatively high penetrative ability, and to discard the rays which have a low penetrative ability. We are thus able to increase the proportion of rays of the total beam which will arrive at a given depth in the tissue. We accomplish this selection of rays by what we call filters—layers of metal or other substances through which the X-rays are passed on their way from the tube to the patient. These filters absorb the rays of low penetration very readily, so that very few of them get through. The rays of high penetrative ability, on the other hand, pass much more readily through the filters, and a fairly large proportion of them get clear through, and are available for purposes of treatment. The exact selection of the amount of filter required for a given voltage or "spark gap" on the tube, with a given result to be accomplished within the body, is a matter which need not be presented here in detail. Data are available from which the thickness and materials of these filters can be determined with fair accuracy if the conditions under which they are to be used are known beforehand. The general effect of filtration is to produce a more homogenous bundle of rays—that is to say, there is a smaller proportionate difference between the *most penetrative* and the *least penetrative* rays in a filtered beam. There is a limit to the amount of filtration which can be applied to any given beam of X-rays for a certain purpose. This will be readily seen when it is remembered that a filter not only stops a high proportion of the rays of low penetration for which we have no use, but that it also stops a certain proportion of the rays of high penetration which we need. Therefore, if we increase the filtration to a great extent, we will not improve greatly the quality of the rays we are obtaining, but we *will* weaken the beam, and we will therefore require much longer time of treatment to accomplish the same

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results—a great inconvenience and waste of time both to the patient and operator.

Let us now consider the problem of treatment with relation to the position of tissue on which it is desired to produce an effect. If this tissue is on the skin, or near the surface, we do not need very penetrative rays to reach it. Further than this, a highly penetrative ray would possess a disadvantage, in that it would not only produce an effect in the tissue we were trying to reach, but a large proportion of the ray might pass completely through the tissue under treatment, and produce effects on tissues lying deeper which we did not want to touch. Therefore, for treatment at or near the surface, a low average penetrating characteristic is all that is required. Rays of low average penetration may be produced by using a lower voltage, or "spark gap," applied to the X-ray tube. For example, most skin work and much superficial gland work may be done at a potential not exceeding one hundred kilovolts crest, corresponding approximately to a seven-inch spark gap between points.

If, on the other hand, we wish to affect tissue at a much greater depth, we should resort to the highest voltage which an X-ray tube will sustain without destruction of the tube. The penetrating rays produced at this high voltage enable us, without exceeding the safe skin limit, to get a much larger proportion of the energy delivered at a depth. But rays of this penetration can not be trained to dash into the body to a certain depth, and then stop short. If we find it necessary to use penetrative rays, we must accept the fact that these rays will not stop entirely when they have reached the desired depth, but that a considerable proportion will pass beyond that depth and in fact clear through the body. As a typical example, suppose we are attempting to treat a tumor with its center at a depth of six inches from the surface of the body, and that the body at the point where it is being traversed by the beam of X-rays has a total thickness of one foot. Suppose further that we are confining the beam of X-rays we are using to a very small cross-sectional area—in fact, suppose we are using a mere pencil of rays. Let us assume further that we are able to measure the intensity of the beam of rays at all points in its path (as we are actually able to do if we substitute for the human body an experimental tank of water or water phantom, since water has almost the same identical co-efficient for absorption of X-rays as has living tissue). If we are exciting our X-ray tube at 150,000 volts crest—roughly, a nine-inch spark gap—and if we are filtering this beam of rays to the maximum practical extent, we may find a series of measurements somewhat as follows: At the surface of the body, we intend to deliver a certain total radiation which is limited by the amount the skin will stand. Let us refer to this intensity at the skin, therefore, as one hundred per cent. If we now measure the successive intensities in the beam as we go below the skin, we will find that they fall off fairly rapidly, until when we arrive at a depth of six inches (namely, at the center of our tumor) we may find that the intensity has fallen off to five per cent of what it was at the surface. Following the beam on through, we will find progressively decreasing intensities until when we arrive at the opposite side of the body the total intensity may be down to as low as one per cent of the intensity at the skin port of entry.

Thus we see that in this hypothetical case where we are using a nine-inch "spark gap" the skin receives one hundred units (all that it will stand) and the tumor receives only five units of dosage, which is much less than the amount we should use to produce an effect of inhibition or destruction. In a case of this sort we may even deliver so slight a dosage to the tumor that we stimulate its growth, an altogether undesirable thing. Let us now see what happens if we increase the applied voltage to a very high value—say 240,000 volts—and again select a filter which will permit us to use a large proportion of the most penetrative rays, at the same time discarding those of less penetration. Assume that we pass a very narrow pencil of such rays through the same patient. If the dose be graded so that we deliver one hundred units of radiation at the surface—this being, remember, the full amount which the skin will safely stand—we find that instead of delivering five units at the tumor as before, we can now deliver possibly fifty or sixty units, and that ten or fifteen of these units will be carried clear through the body and delivered to the skin on the opposite side from the port of entry. This, in brief, is the advantage of the new intensive deep therapy. For the same equivalent safe dosage to the skin, we are able to deliver a much higher proportion of radiation at a depth below the skin. However, the radiation received by the tumor is not determined alone by the skin radiation, the depth, and the penetrative power of the ray. Another factor enters which complicates the problem very considerably, and renders it necessary for us to conduct a number of rather involved experiments in order to determine the exact ratio of the depth dose to the skin dose. This other factor we term "scattering" and it can best be expressed thus. The pencil of rays which comes from the tube may be considered as passing directly through the patient in a straight line, losing energy all of the time by reason of its absorption by the tissues. This absorption is of two kinds. The first kind results in an actual conversion of some of the X-ray energy into energy of chemical reaction or its equivalent. This is the type of absorption that produces biological effects on the tissue. The second type which we can also call absorption in the general sense of the word, consists in a loss of energy by the X-ray beam, but this energy, instead of being converted into chemical effects, is merely absorbed from the primary straight line beam of X-rays and re-radiated from the point where it is absorbed in the form of X-ray energy again.

Thus we have a primary beam of X-rays passed straight through the body, part of this beam being absorbed on the way and converted into chemical energy with resultant biological effect and another part of the beam being likewise absorbed as it passes through, but *reconverted* to X-rays which

scatter in every direction. These scattering rays are of two kinds. The most pronounced type, and only one which produces any effects which we must necessarily take into account in computing dosage, has the same penetrative ability as the primary beam of X-rays which caused it. The second type of re-radiated energy is of very low penetration, and stops before it has passed through any measurable amount of tissue. This scattering effect of X-rays was formerly not taken into account in computing dosage, because at the low voltages then in use, the penetrative ability of X-rays was fairly low, and they were therefore absorbed very rapidly. The scattering rays would thus be absorbed before they had come very far from the point where they scattered from the main beam, and would not be noticed in the total result. However, with rays of tremendously high penetration which we are now able to generate at 200,000 volts and over, the scattered energy travels very readily to a considerable distance from the point where it was deflected from the main beam. It may even be re-deflected a number of times on its divergent path. Thus we must consider in computing the radiation which falls upon the tumor at a depth below the surface, not only the primary bundle of rays which has been directed at the tumor, but all of the scattered radiation from other parts of the body which likewise happens to fall upon the tumor. To appreciate the practical importance of this, assume that we have a tumor about the size of a walnut at the depth of several inches below the surface of the body. Assume further that we are able to locate this tumor with extreme accuracy and to direct a beam of high penetrative X-rays upon it in such manner that the beam will be no larger than necessary to strike all parts of the tumor. We will now have a dosage delivered at the tumor due to the direct beam of rays, and a slight additional dosage due to such scattering rays, set up in the path of the direct rays, as happens also to strike the tumor. Now let us enlarge our beam of rays which has been directed at the tumor until it covers a very much greater area, and let us keep the radiation of exactly the same quality as before, so that in a given time we have passed as much energy into the body as the skin will permit without reaching the destructive limit. The tumor will have received the *same amount* of dosage from *direct radiation* as it formerly did. But it will have received in addition a *very much* larger amount of scattered radiation, because we have greatly increased the area of the primary beam and have therefore greatly increased the total volume of tissue which has been excited into radiating scattered rays.

The computation of the total dosage from a theoretical consideration, while it is doubtless possible, is of too great difficulty to be of practical value.

Experimental work has therefore been done on the following points:

1. To find an experimental medium which would offer the same resistance to the passage of X-rays and generate the same proportion of scattering rays as human tissue does.

This has been satisfactorily answered by the use of water. Water phantoms or containers approximating the shape of the portion of the human body it is desired to treat have been made to use in experiments.

2. The development of an instrument which when placed in a water phantom (or within the human body) and exposed to X-rays, will give readings proportionate to the strength of the biological action at that point.

This problem has been fairly well solved by the use of small cells termed ionization chambers. These cells are constructed of horn or celluloid, and lined with a layer of graphite to serve as an electrical conductor. Since the materials used in their construction correspond fairly well with tissue and with water in the rate at which they absorb energy, they exert no great disturbing influence on the measurement. A highly insulated electrical wire is led into the center of one of these small cells, and a known amount of electrical charge is placed on the wire. If no X-rays strike on the cell, normally the air within the cell acts as an insulator and the electric charge placed on the wire will remain for a very considerable period of time without leaking off. When it does so leak most of it is carried from the wire through the insulation covering it, and practically none of it passes across the air space within the cell. By timing the rate at which a known charge leaks off through the insulation of the wire, this loss can be corrected for. If, now, a given charge is placed on the wire, and the cell exposed to X-rays, the air within the cell is ionized—that is to say, the air absorbs X-rays and converts them into energy of ionization, so that the air becomes a conductor of electricity in proportion to the quantity of X-rays striking it. Due to the electrical conductivity of the wire, the charge now leaks off very rapidly. The time during which it leaks off may be measured, and after subtracting the known leakage rate of the insulation on the wire, the remaining time serves as an indication of the strength of X-rays to which the chamber was exposed. The shorter the time the more intense the radiation. In fact, the strength of radiation and the time of discharge for a known charge bear an exact inverse proportional relation within the limit of experimental error.

3. Having now obtained an experimental medium similar to tissue, and a measuring instrument capable of measuring the intensity of radiation at any point within that medium, we may proceed with our experiment. A beam of filtered X-rays produced at a known voltage or "spark gap" and filtered through carefully measured filters in order to remove the low penetrating components, is allowed to pass through such a water phantom in which, while the ray is constant in quantity, the ionization chamber is moved from point to point, and the distance at each point is measured.

By taking a very large quantity of such measurements it is possible to plot lines of equal dosage through the cross-section of the water phantom.

A chart so constructed shows the cross-section of the phantom through the mid-section of the ray, and assumes a radiation at the face of the

water phantom where the beam enters of 100 per cent. Using this value as a standard, a line is then located on the chart corresponding to the distance from the port of entry at which the radiation has fallen off to 90 per cent. This line curves somewhat and extends beyond the area of the original beam, due to scattering. Similar lines are constructed for 80 per cent, 70 per cent and so on until the entire area in question has been plotted.

A large number of such charts have already been constructed for water phantoms. Using such a chart selected for its conformity to the portion of the anatomy under treatment, it is possible to predict the intensity of radiation which will be delivered at any desired point when the full safe dose has been given at the skin.

It is even possible to use such charts in combination, so that several ports of entry may be used, and the total cumulative effect of dosage at an interior point may be predicted. It must not be forgotten, however, that when using several ports of entry, the full skin dosage must *never* be given through any one port, as scattering rays will be excited when radiation is passed in through the other ports, and some of these scattered rays will reach the skin at the first port of entry and add to the original dosage that has been given there.

In closing, a few words should be said about the present limits of voltage and the future possibilities that may increase this voltage.

The construction of X-ray apparatus to deliver extremely high voltage now presents very few difficulties, if carried out by those familiar with the work. The construction of the tubes to withstand these high voltages has not at the present time been carried beyond certain limits. The new high voltage Coolidge tube reaches its safe limit of operation in the neighborhood of 200,000 to 220,000 volts. If a higher voltage than this is used, destructive sparking, particularly around the anode end of the tube will occur. This sparking is due to an accumulation of negative electrical charge on the inside of the bulb, which then attracts sparks from the positive terminals of the tube which reach out over the glass in an attempt to neutralize this charge. If these sparks are permitted to occur too frequently they will perforate the glass. In suppressing high frequency surges in the high voltage line, the writer has been able to operate these tubes successfully for rather extended periods at 275,000 volts. Rather more watchfulness is needed, however, at this voltage, even with all of the electrical precautions that can be adopted to insure smooth operation. Without using other methods than those that have been tried, it does not seem feasible to operate the present day Coolidge tubes successfully at higher than 250,000 volts, even with this new system.

CONCLUSIONS

A tremendous advantage lies with the use of high voltage heavily filtered rays in that more energy can be delivered at a depth without damaging the skin.

It is impossible to predict the dosage at a depth without taking into account the cross-section of the in-going beam of X-rays.

Extended experimental work has enabled the construction of charts from which the exact dosage at any given point may be determined if the applied voltage, the filtration and the size of the port of entry are known.

Underweight a Delusion—Is there but one normal, healthy standard weight corresponding to every height, so that he who exceeds it is "overweight," and he who falls below it "underweight?" That this idea is a dangerous fallacy is contended by Charles K. Taylor of the Carteret Academy of South Orange, N. J., writing in The Outlook (New York) on "The Great Underweight Delusion." According to Mr. Taylor, a "stocky" boy, or a slender one, may be just as normal and healthy as one who has the "standard" proportions of the Apollo Belvedere. They are of different types, that is all. Some people are doubtless too fat and others too thin, but that fact is to be ascertained, not solely by comparing weight with the height, but by a system of measurements taking both these figures into account. Mr. Taylor has worked for years to construct a system of tables for this purpose, and thinks he has now a satisfactory method of applying his ideas in practice. He writes:

"Children are frequently slender because it happens to be a hereditary type just as it is hereditary for some to be stockier and heavier than the average. Some races are typically slender, with weight below the general average of humans.

"The very essence of our delusion is the claim that there is only one normal and healthy type of build—the 'average'—and if children (not to mention adults) happen to be more slender than this highly worshipful average, then, obviously, something is wrong with them. They are 'underweight.' A frightful term that sends whole communities into providing fattening diets for perfectly healthy children and doing everything that uncanny genius will suggest to make a lot of normal children morbid over matters they do not need to worry about.

"It might be interesting for some one to analyze the Worship of the Average. I don't know what we would do without it. Why, our whole educational system is based upon it. The average child! And that is why the duller-than-average child is perhaps prodded up a little; children brighter than the average are caught fast in the machine, so that educationally they are rarely able to come anywhere near their capacities.

"So when we insist that children should at least came up to an average in weight we are doing only what we also do in the classroom, with this difference, however: When a child's weight is overaverage, then we are likely to smile with approval; but when a child is mentally overaverage, well, we just let that child remain in the grip of the machine that keeps achievement down to the average scale of things.

"Our stand is simply this: That it is just as normal and healthy for some children to be more slender than the average and for others to be stocky or thickset, as for still others to approximate the average, that it is a matter of inherited type of build, and all we need to do is to see that a child is properly developed for his or her normal type of build.

"When a child is in good physical condition, and particularly when that child's muscles are not flabby, but firm and efficient, then we may be sure that the child's weight is correct, no matter what it is. And our work, then, is merely to see that a child has a physical development corresponding to his or her type of build.

"It will take a very serious mental upheaval to bring many of us to see that the question is health and development, and not one of weight, but we are coming to it little by little. And once this is accepted, then another question will come promptly into being. Here is this one: 'How are you going to know when a child is well developed?' Nor is this going to be difficult to answer."—(Editorial, Journal of Indiana State Medical Association.)

Detailing Physicians—Through familiarity on the part of the doctor with the U. S. Pharmacopeia, the National Formulary and New and Non-official Remedies would make "detailing" a less popular indoor sport for the manufacturer.—San Diego Medical Society Bulletin.

OVER FIFTY YEARS IN MEDICINE *

By ROBERT F. ROONEY, M. D., Auburn, California

Fifty-six years ago, or in June, 1866, I entered upon the study of medicine in the office of two medical partners in a small but central town in the then Province of Lower Canada, now the Province of Quebec. The partners kept their own medicines and there I imbibed my anatomy and physiology in the intervals afforded between the compounding of mixtures, the rolling of pills, and the mixing and folding of powders. There I was present at the setting of fractures, and the operations of minor surgery. Yes! and even the extraction of teeth—the nearest dentist being twenty miles away.

I believe such training to be good for a young man, and makes him better able to handle his own patients in his early years, rather than the student who enters college without such experience, and who begins private practice without other than hospital work, which is so entirely unlike the handling of private patients. Shortly after entering the office of my preceptors, one of them took me to visit a hopeless case of—peritonitis? The patient was a young Scotchman who had just arrived at the local hotel with his wife whom he had married before leaving the old country, and who knew no word excepting Gaelic. He came with a few pounds in cash, intending to buy a farm and become a settler. He was almost at once stricken with what was, no doubt, an attack of appendicitis, in the face of which the profession then stood helpless, calling it "peritonitis" and keeping the unfortunate under the influence of opium until death closed the tragedy.

The scene at the bedside has haunted me througout the years. The man lay gasping out the last of his life, and his young wife knelt by the bedside with her arms outflung across his body, and her face buried therein, crying out in the rhythmical cadence the Gaelic words, "Hamish sorg ma Dheelish! Hamish sorg ma Dheelish!" It was the despairing cry of a broken heart in a new world, without friends, and even without knowledge of the language spoken around her.

Often, later in life, when the abdominal cavity had ceased to be sacro-sanct, those mournful sounds came back to me, as a reminder that this poor fellow's young life might have been saved by a comparatively trifling operation.

Another instance. My preceptors were both progressive men, and their journals recording cases of ovarian tumors being cured by the injection of Tr. Iodine after tapping, they set a day for operating on a case in their practice. I accompanied them to give chloroform, if needed. The patient was past middle age with an immense tumor. She was successfully tapped and the iodine injected through the trocar into the emptied sac, but the woman lived only for a short time, and in great pain. I can yet see my eldest preceptor, sitting grief-stricken over the result.

In the autumn, I entered the medical department of McGill University. It was the year that a four-year course was first adopted and a strict examination held in Greek and Latin (at the student's choice), mathematics, French or English (at choice), dictation, to show writing and spelling and familiarity with the language. Only two other colleges on the continent, at that time, demanded a four-year course—Harvard and the University of Pennsylvania—all the others demanding only a two or three years' study. Of course, a good university course precluded the necessity of passing such examinations. I graduated and received my M. D., C. M., on March 31, 1870—over fifty-two years ago—and began practice in a neighboring town to my preceptors, where I remained until 1877, when the glamor of California overwhelmed me and I came west.

The years of my medical life have been epochal. They compass the great majority of the wonderful discoveries of medicine and surgery. This I aver without fear of contradiction. Also it has been prolific in fads and cults. At the outset of my career, Virchow had just promulgated his cell theory which revolutionized medicine; and Lister had revolutionized surgery with his antiseptic teachings and practice, and the operating rooms throughout civilization echoed to the hissing of carbolized spray, and operator, patient, assistants and observers were indiscriminately showered with the odorous vapor. My student days in the operating room are recalled by all phenol odors, which are, one and all, obnoxious to me for that reason.

But to this man we must yield all honor because to his worked out theory of wound infection is due an entire revolution in the treatment of wounds, and in surgical technique. Where thousands formerly died, thousands now recover, due to the labors of this one man.

In my graduation year died Dr. James Y. Simpson, with whose name chloroform is carved on the pillars of medical progress, and to the introduction of this agent into obstetrics, relief to woman's pangs is due. It is a curious bit of history that for this alleviation of the pains of childbirth, Simpson was bitterly assailed by the Scottish clergy, as the Bible had proclaimed that "in sorrow shalt thou bring forth children." But he came back with this riposte: That when Eve was created, God threw Adam into a deep sleep, and, taking one of his ribs, formed Eve. This was a silencer.

Although McDowell, an humble country doctor, performed successfully and almost unaided and alone, the operation of ovariotomy in 1809, no one had the courage to follow in his footsteps until into the '70's, when Sims, followed by the Atlees and (I think) Thompson of Harvard, made the abdominal cavity an open road to surgery. But it was some years before the surgeons, in the absence of soluble ligatures, ceased to clamp the stumps of the removed tumors outside the abdomen. The discovery of absorbable ligatures, and aseptic silk and other material, gradually did away with danger. I might here add that to Lawson Tait of England, we are greatly indebted for his teaching of asepsis, instead of antisepsis.

Then one brilliant discovery after another came within the compass of my medical life. Charles Louis Laveran, an obscure regimental surgeon in

* Read before the Placer County Medical Society.

the French Army, buried in the lonely sands of Africa, found the plasmodium malariae in the blood of malarial victims. For this he was hooted at, and belittled by the medical big-wigs of Paris, but "Truth is mighty and must prevail," and very soon his discovery was verified throughout the scientific world.

Then came Robert Koch, another obscure man, who demonstrated the whole life history of the TB, and so thorough was he, that he said practically the last word concerning it to this day. He also demonstrated the cholera spirillum, and he, too, was ridiculed by the "know-it-alls,' and Pettinkoffer, a celebrated German scientist, said he would undertake to swallow, and did swallow, a tube of cholera germs to prove the falsity of Koch's claims, and thereby nearly lost his life. After his recovery he was magnanimous enough to acknowledge Koch's discoveries, and to give him full honor therefor.

In 1885 Pasteur, one of the most brilliant men that ever lived, a chemist and not a physician, did the greatest thing for medicine that the nineteenth century witnessed. He demonstrated the immunizing treatment for rabies and inaugurated serumtherapy.

By the discovery of cells and germs, the microscope came into its own as an instrument of real scientific value. The stethoscope was just coming into general use, and I well remember my first one, used in my student days. It was turned out of one piece of cedar and about six inches long. Also I remember the first clinical thermometer used in the Montreal General Hospital. It was about sixteen inches long, fastened to a scale, with the end containing the mercury bent at a sharp angle so that it lay snugly in the axilla while the body of the instrument lay upon the breast of the recumbent patient. It was truly a fearful and wondrous instrument. Later in my time, instruments of precision came to aid the clinician—the sphygmograph, the sphygmomanometer, the counting chamber, the hematocrit, the hemaglobinometer and many lesser aids to medical science.

In the '90's came the era of the womb-slitters, made possible by the perfection of the speculum. There was a time when every doctor owning one of these instruments was slitting the cervix uteri for all female troubles. These were followed by the menders—with much language.

Next came one of the most important aids to the modern surgeon—the Roentgen Ray—or so-called X-Ray, discovered by Wilhelm Konrad Roentgen in 1895, which bares men's inner secrets. Radium followed in its footsteps. And so we progress.

Next I will speak of the fads and cults in medicine which have sprung up in my time. The Thompsonians, founded by Thompson, of Massachusetts, which afterward developed into the eclectic school, was just coming into vogue about the time I became a student.

The homeopathists, founded by Hahnemann in Germany, was attaining a hold upon the American public at the same time.

Next came osteopathy, founded in 1874 by Dr. A. T. Still.

Following this in the latter years of the century came Christian Science, evolved (by the much married Mary Baker Glover Patterson Eddy) from the foolish emanations of the addled brain of a paranoiac.

Next comes the natureopath, and then the crowning joke of all—the Chiropractor—who can cure typhoid fever, diphtheria, cancer, gonorrhea, syphilis, or any other old thing, with the chiropractic thrust. It is to laugh!

But, gentlemen, I see a better day coming. The Homeopaths now require almost, if not quite, as thorough a scientific training as the regular profession and are becoming as broad-minded as science can make them.

The Eclectics are also approaching nearer and nearer to us in their standards, and within another lifetime, like my own, will stand side by side with us. The Osteopaths also are requiring a better education and are demanding a thorough training in anatomy and physiology, especially, and will ultimately blend with us.

But the Christian Scientists and the Chiropractors are simply ulcers on medicine and must have their day, until they die out, which they undoubtedly will in the not too distant future. It costs nothing to become a Christian Science practitioner, and any waiter, farm-hand, laborer, etc., who can command $100 to buy a diploma, can become a Chiropractor.

The Serologists and Organotherapists should also be mentioned, as they have both got quite a standing, both in and out of the profession. Some of these theories have a real value, but most of them prove to be duds.

And now we are in the midst of the Endocrinologic craze and the era of Vitamines. We will spend a moment over these before closing. The latter class seems proven, although they do not yield their secrets to either the chemist or the microscopist, but they do their work! That is the point; selah.

But the Endocrinologist needs the hobbles of caution put upon his enthusiasm until much more research is made. The giant, the midget, the fat boy and the human skeleton are regarded now as victims to their own glands, and hopes are entertained that these processes can be controlled and the ancient mysteries of disease will be explained, so that what have been considered hopeless cases can be satisfactorily treated. But the realm of endocrinology has not been well explained as yet and the bold adventurer in its mazes is liable to become lost, or to do much damage to his fellow man. The conditions of the body that control these glands of internal secretion are still almost entirely unknown. As yet only two endocrine products are chemically known—thyroxin and epinephrin. The latter is very potent intravenously, but inert when swallowed. Until we know more about them all, we can not be sure that they are not altered or destroyed in the digestive canal. Therefore, why talk about Hormones? Again, to what degree is substitution therapy possible? Its value has been proved in thyroid deficiency, but it is useless in pancreatic diabetes.

Often the Organotherapist is justified by the

patient's expression of added well-being, or by disappearance of subjective symptoms—criteria of uncertain value. The facts should be faced that endocrine physiology is unproven, despite positive statements to the contrary. Every medical publication vaunts the use of some endocrine fad, even down to gland transplantation. Credulity rules mankind. "There is a sucker born every minute," it has been said, with, unfortunately, much truth. This opens the door for exploitation of the medical profession by charlatans, quacks and unscrupulous manufacturers. Medicine is humiliated by accepting, as gospel, every claim made with sufficient positiveness.

However, I do not wish to condemn endocrinology, nor to lessen the just claims that it has earned, but I do ask you for a proper scientific attitude toward the data that are advanced.

And now I have gone over my fifty-odd years in general practice, necessarily omitting many discoveries that have come to the saving of human life and well-being, during that period, and trying to keep down my own personality, but I can say with Virgil's hero, *"Pars fuit erat."*

Believing that our work is all the better for a little play, I will conclude with something in a lighter vein. I will give you a few verses written by myself on

THE OLD PRACTITIONER *

The old Doctor's getting older every year.
We watch his failing powers, year by year.
His step is growing slower;
His head is bowing lower,
And we note his lessening vigor, year by year.

His eyes are growing dimmer, year by year.
His legs are getting slimmer, year by year.
He has a tremble in his voice,
And his breath it makes more noise,
As he toddles down life's pathway, year by year.

His teeth are dropping out, year by year.
His false ones rattle about, year by year.
He mumbles at his food,
His digestion is not good,
And dyspepsia grips him harder, every year.

If you think he is down and whining, owing to years,
You've got another think a-coming, for this year.
For he's just as good at poker,
And the same old jolly joker;
He's a fighter from away back, through the years.

His mind is, maybe, duller, year by year.
But his experience is fuller, every year.
In his finger-end's an eye,
That your inner ills can spy,
And he makes better diagnoses, every year.

When the young men make their blunders, all the years,
The old cock stands by and wonders, year by year,
At the things they think they know,
That so surely are not so,
And knows that they'll grow wiser with each year.

So he's growing old and older, every year.
He sees his finish nearer, every year.
Gray hairs are getting thicker,
Has less capacity for licker,
And he's worse and worse a kicker, every year.

In his every fault we love him, through the years.
There are none that rank above him, in the years.
Soon the Lord will call upon him,
With his good and bad traits on him,
And he'll go to join his fathers for all the years.

* These verses were read before a few guests at a dinner in Coronado, some time ago, but never before published. (Rights reserved.)

The foregoing verses will apply to all of you, as pass the years.

INDUSTRIAL MEDICINE AND THE GENERAL PRACTITIONER *

By GAYLE G. MOSELEY, M. D., San Francisco

The treatment of industrial accident cases by the general practitioner has not proven satisfactory to either the physician or the insurance carrier. All of the causes of this dissatisfaction need not be considered at this time. The problem that presents itself for consideration is the bringing about of a better relation between the physicians and the insurance carriers, and securing co-operation instead of antagonism.

The general practitioner is an important factor in the furnishing of medical service to the large group of people covered by the Workmen's Compensation Law. The further trend of medical service in industrial accident cases will be largely determined by the attitude and the service rendered by the physician in general practice.

Whether or not industrial work will be more widely distributed or more centralized than it is at the present time, depends entirely upon whether or not the physician in general practice takes sufficient interest in these cases to give good service and furnish promptly the reports that are necessary for the insurance carriers to properly conduct their business.

If the doctor treating an industrial accident case will do three things he will rarely have cause for complaint.

First—Is to send full report of the accident promptly to the insurance carrier, as a doctor's report is the basis on which the case is handled, and is necessary before compensation can be paid.

Second—Not to attempt to continue to treat cases that should be in the hands of a specialist. All cases of eye injuries and severe fractures should be treated by specialists in those respective lines, and there is nothing that gives an insurance carrier a better opinion of a physician in general practice than to have him write in and suggest that a serious injury be placed in the hands of a specialist.

In private practice the physician does not hesitate to ask for consultation or refer a case to a specialist, but in industrial accident work a request for consultation is very rare. The physician that immediately refers serious cases to the insurance carrier inspires confidence, with the result that the insurance carrier will feel safe to leave any case in his hands, knowing that the doctor recognizes his limitations and can be depended upon to act accordingly.

Third—Is to send in a bill for services rendered. If this is sent in according to the established fee schedule, being careful to note on the bill the reasons for any unusual charge, or charge in excess of that allowed by the fee schedule, the bill should be paid promptly.

The physician should be extemely careful, however, to make out his bill strictly according to the fee schedule, as the medical expense is a fixed amount, being a definite proportion of the premium collected for each risk.

* Read before the Section on Industrial Medicine of the Medical Society of California, Yosemite National Park, May 15, 1922.

If the medical expense is in excess of the allowance provided by the rates on that particular risk, the business immediately becomes unprofitable. Because of the fact that some think that the fees allowed for treatment of industrial accident cases are too small, there has been a tendency to take advantage of the fee schedule and make charges for unusual amount of time and dressings. Sometimes on examining X-rays that were not extremely clear, the physician has been able to see a chipped bone or a slight discoloration, where further X-rays showed a normal condition.

The expense of physiotherapy is another item which gives promise of causing trouble between the physicians and the insurance carriers. Physiotherapy is necessary and helpful in many cases, but should not be used as a means of increasing the medical expense in industrial cases.

The medical cost in workmen's compensation insurance is an economic problem, and the organized medical profession should co-operate with the insurance carriers to make this expense as reasonable as possible, and at the same time be fair to all parties concerned.

The first consideration must always be service to the injured employe, and the profession should go on record as favoring better service for industrial cases, just as they have gone on record for the betterment of hospitals.

In case of a controversy arising as to the amount of a medical bill, or any other question with reference to an industrial accident case, the matter should be promptly referred to the office of the State Medical Society, and their opinion or ruling should be cheerfully accepted by the physician. The establishment by the society of a department to arbitrate matters with reference to industrial practice, is the first real constructive work that has been accomplished by the medical profession since the passage of the Workmen's Compensation Law.

If the individual physician will work in harmony with the medical society and not be influenced by a few whose main mission in life seems to be to stir up strife between the physicians and insurance carriers, many of the troubles and misunderstandings will be a thing of the past.

(333 Pine street.)

Putting "Jazz" into Medical Book Publishing—Some of the advertising and propaganda methods of some of the medical publishing houses may be read best to the tune of a "jazz" orchestra. They read like an advertisement of "Yeast," "vitamins," "pink pills" or the "miracle man." They appeal to the cupidity of the physician, and they claim to be "new stuff," which probably accurately describes many of the books which physicians are asked to buy and consider as authoritative. In answer to many questions from physicians about the value of various books, the Journal makes two suggestions to our members: Don't bother about a book that is advertised by the "direct-by-mail" method, and don't bother about one until you have seen a number of reviews of it in medical journals, whose review pages are not influenced by a "complimentary copy."

PHYSIOTHERAPY IN THE TREATMENT OF THE CHILD WITH RHEUMATIC FEVER *

By EDITH BRONSON, M. D., San Francisco

Children suffering from the rheumatic cycle of affections, acute arthritis, carditis, and chorea, occupy a number of days of hospital beds disproportionate to the actual number of such cases admitted. After a period of acute illness, many a child ceases to improve and settles into an invalid state. Nutrition and musculature degenerate, and of even more importance, the weariness of discouragement is added to the actual physical disability. The unconscious attitude of the physician to the chronic cardiac is too well registered on the sensitive nervous system of the child. Finally a bed can no longer be spared, the child is allowed to sit up, perhaps walk about, and is sent home, physically incapacitated and mentally discouraged.

The purpose of this paper is to report an effort to shorten the hospital stay of the rheumatic child, to prevent the physical disability of prolonged confinement in bed, and to have the patient leave the hospital in posture and general physique, superior to the average untrained healthy child. Finally we have been attempting to help the child to remain keen to improve, during the difficult adjustment stage in his own home.

In the treatment of acute cardiac disease, too often we can not prevent impaired function in the heart itself. Healing in damaged valves and muscles, as healing elsewhere in the body, takes place by fibrosis, and the presence of non-elastic fibrous tissue in an organ whose function depends in a peculiar degree on the elasticity of its muscle, causes an unavoidable permanent injury. We have escaped from the interpretation of the functional disability following such injury, by the presence of the signs of valvulitis. The function of the heart as a whole is being studied. Gradually we are beginning, I may better say returning, to the study of both the pathology and function in an organ in its relation to the physiology of the individual as a whole, and to his adjustment as a member of society. Of the greatest importance it is, that we consider in the physiology of the circulation, the interchanging balance between circulatory, respiratory, metabolic, and nervous systems. What physiotherapy attempts to do is to preserve and increase the usefulness of these compensating functions.

In whatever ailment, physical treatment may be applied, whether to postural defects, or to cardiac insufficiency, the principles for success remain the same, and for them we have to thank the experimental physiologist. An attempt to treat cardiac injury in itself by physical methods, would be like attempting to treat acute rickets by putting plaster casts on the child's legs. For success the individual as a whole must be the object of therapy.

Probably each observing physician has developed a method of his own for estimating cardiac effi-

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* Read before the Pediatrics Section of the Medical Society of California at Yosemite National Park, May 17, 1922.

ciency, but we live in an age of classification and standardization. Exact measurements are taking the place of clinical opinion. Efficiency tests, the significance of the measurements of the vital capacity, the interpretation of changes in pulse and blood pressure, are being studied in cardiac clinics. If such methods are used to develop clinical judgment, the patient will be better cared for. There is a danger that, as the results of researches are standardized, the standard will be applied without due regard to the individual patient, and will increase the present tendency to turn the physician into an expert manipulator of machines. Tests of function and methods of treatment are of value to the patient only when utilized with observing and sympathetic judgment.

I have made these digressions upon the subject to which I am assigned, partly to justify myself for the rather narrow outlook which I may seem to take in the actual work which I am reporting.

By carefully graded exercises we have been able to shorten the hospital stay, and improve the exercise tolerance of cardiac children. An outline of the method of treatment which we have gradually evolved is presented below.

PHYSIOTHERAPY IN THE TREATMENT OF CHILDREN WITH RHEUMATIC FEVER

CARDITIS

First Stage (10 minutes twice daily)—To be started as soon as pain subsides:

1. Effleurage to arms and legs.
2. Teach **correct** breathing. When possible include abdominal massage for five minutes.

Second Stage (20 to 25 minutes daily)

1. Effleurage and light petrissage (to extremeties and back or abdomen).
2. Passive arm movements with breathing.
3. Passive leg movements—gradually adding active ankle and knee flexion and extension.

Each exercise to be done from three to five times.

When possible increase active work. Do one arm, including exercises, before massaging the next. In bad cases do arm, then leg.

Third Stage (30 to 40 minutes daily)

1. Massage (medium) general.
   (a) Effleurage, petrissage, friction, tapotement.
2. Light resistive and increase gradually.

Exercise given for every joint movement and each exercise repeated three to eight times.

3. Deep breathing.

Fourth Stage (40 to 45 minutes daily)

1. Active exercises in bed.
2. Start standing—**teach posture.**
3. Heel raisings, arm exercises with breathing for a couple of days, then add trunk bendings and twistings and leg exercises gradually increasing at the rate of one to two daily.

Fifth Stage (45 to 60 minutes daily. According to age and strength of child)

1. Vigorous exercise, including stair climbing, running and jumping.

CHOREA

First Stage—To start immediately on admission to hospital:

1. Effleurage to extremities and back or abdomen.
2. Teach breathing as soon as possible.

Second Stage

1. Effleurage and light petrissage (to extremities and back or abdomen).
2. Passive movements combined with breathing.
3. Assistive, active exercises.
   (a) For co-ordination.
   (b) For re-education.
   (c) For rhythm.

Third Stage

1. Massage (medium) general (no tapotement).
2. Active exercises with breathing.
3. Active exercises especially for back (assisted at first).
   (a) For co-ordination.
   (b) For re-education.
   (c) For rhythm.
4. Chorea tests.
5. Singing vowel sounds.

Fourth Stage

1. Active exercises in bed.
2. Start standing, **teach posture.** Begin with easy exercises and gradually increase, not allowing an unassisted movement until child has balance and confidence.
3. Continue 4, 5 and 6 of Stage Three.

Fifth Stage

1. Vigorous gymnastics. Prepare to go home.

We have tried to make the system as elastic as possible. A "stage" may last less than a week or several weeks, according to the condition of the patient. Again, we have not been able to state definitely when physiotherapy should start. In the type of rheumatic fever in which a high temperature and an acute arthritis subside rapidly under treatment, the first stage of physiotherapy is started as soon as the pain and swelling have disappeared. If, however, we should always wait until there were no rise in temperature, we should deprive of massage and passive exercise, the type of cardiac child who has at no time a high fever or acute arthritis, but who for months may run a low grade septic temperature curve—the subacute chronic rheumatic child. Such a patient is in the greatest need of physical training. On the other hand, a child with no rise in temperature may be suffering from a degree of cardiac failure which may contraindicate the gentlest of massage. Clinical judgment must be used as to when to start physiotherapy, as well as when to pass from one stage to the next.

During the first three stages the patient is carefully protected from exertion of any kind except that which accompanies the exercises. He is fed by the nurse and encouraged to do nothing for himself. It is a well recognized fact that the ordinary routine of work, for example, that of the housewife, brings weariness without giving training to the physiological functions. The training of the athlete is accomplished by increasingly severe muscular exertion interposed with periods of complete relaxation. Co-ordination of respiration with muscular contractions is imperfect in the untrained individual as contrasted with the trained. The training of the cardiac child is essentially the same as that of the athlete. He is first of all taught relaxation, taught how to rest, taught how to breath as a means of improving his vital capacity, and how to breathe rhythmically with the passive arm and leg movements which

are gradually added. In passive movements attention is given to counteract the tendency to tendon tightening which is so frequently a sequence in all chronic illnesses. The length of the period of exercise is increased gradually, as well as the degree of work. By the end of the third stage the type of massage has become vigorous, especially to the abdomen and back. Friction and tapotement as used probably produce tendon and muscle relaxation not unlike that secured by certain of the cults in their manipulations. Resistive now take the place of passive exercises. These require voluntary effort, yet effort which is under the control of the technician. Though by the end of the third stage, it is not infrequent to have produced muscular hypertrophy, the predominating effort has been to teach relaxation and co-ordination.

The pulse, respiration and systolic pressure are taken daily by the technician, before and after exercise, and again in two minutes. Once weekly the physician is present throughout the period of treatment taking the systolic blood pressure to note the type of curve, and to make observations on the child's general reaction. Up to the end of the third stage, rarely does the pulse increase more than fifteen or the systolic blood pressure rise more than ten millimeters of mercury.

By the fourth stage active exercises for arms, legs, back and abdomen are substituted for resistive. These are interposed with short periods of breathing. The child has now learned rhythmical breathing. He begins to stand and is taught first of all, posture. A correction of postural defects has been emphasized throughout the previous stages. Probably no other word has this importance in physiotherapy. Postural training not only increases the vital capacity, diaphragmatic contraction and expansion, but it has a very definite relationship to the functional nervous system of the child. Setting up exercises develop "backbone" as well as muscle.

The fifth stage is a preparation for the activities of home life. The attention to posture and breathing is carried into such exercise as climbing stairs and running and jumping. The ideal is to have the child leave the hospital a trained individual, able to do the routine work of his childhood with co-ordinated and not wasted effort.

Not all children with corditis ever reach the degree of physical well-being which I have pictured. Those unfortunates who, after months of illness, are left with a developing stenosis, damaged muscle, and adherent pericardium, may pass their lives, usually of only a few years, unable to perform the equivalent of our fifth stage of exercises. Even in these crippled children, the trained use of the compensatory functions has surprised us in the results obtained. With the co-operation of intelligent parents these children, leaving the hospital able to take only the third stage of exercise, may continue to improve so that they can carry the burden of school life, and in a narrowed sphere, lead a useful existence. Reinfection, rather than over-exertion, is to be dreaded. Their course of training has taught them when they should rest, as well as how to make the ordinary duties of life exercise, rather than work. Our failures have been from environment adjustment, rather than the actual condition of the child. The crying need for such children is a cardiac convalescent home. After a period of hospital care improvement may cease. Children with acute illnesses come and go, the cardiac child remains. Unless his own home is exceptional such a child should continue his treatment in a home with his own kind, with games and school suited to his endurance. As a problem of preventive medicine, the rheumatic cycle child needs the same careful study as the child from a tuberculous environment.

I have used the title "Rheumatic Fever" advisedly, so as to include that manifestation of the rheumatic cycle called chorea. If chorea is associated with arthritis and carditis, the treatment is the same as for these with the addition of special co-ordination and educative exercises. In uncomplicated chorea treatment starts the day following admission to the hospital. The usual routine of quiet and isolation is enforced. No sitting up is allowed, no book or plaything. The teaching of relaxation is especially valuable here and assistive movements controlled by the technician give the child confidence. So far as I have been able to observe, no specific cure, such as is not infrequently seen, if some acute illness like influenza or measles intervenes in the acute stage, has followed physiotherapy. However, in rather frequent instances, a time comes when chorea as an "infection" has passed, but the "habit" of chorea remains. In such cases the work of the physiotherapist in re-education, is of inestimable value. The ideal would be for a full-time technician for each child, to assist in his play, at his dinner, and in all the ordinary duties the performance of which he must relearn.

In conclusion, we are able to state that after even severe rheumatic infection, a child wisely treated by physiotherapy reaches the stage of convalescence with a posture and muscular development superior to that previous to his illness, and that he leaves the hospital physically trained to use to the best advantage the functions compensatory to his cardiac injury.

I have to thank Miss Boville, physiotherapist, for her enthusiastic co-operation in this work.

(240 Stockton street.)

Rejuvenating Roués—In a recent Sunday edition of a California paper, in a department advocating free organ recitals, religious ceremonies and fakes, we find under prominent display some more purported news about how old broken-down roués may be restored to youth, and even how their white hair may resume the color of youth and their wrinkles fill out under the skin under the latest goat gland operation. The article in question indicates that it is a Universal Service report from London. It takes up a further exploitation of "Professor" Steinach's operation. The article goes on to say that "Professor" Steinach is kept busy rejuvenating elderly men and women. It states that after the operation "white hair turns to its natural color, wrinkles fill out and take on fresh color." Further quotation from this article is: "In England interest in the rejuvenation craze subsided about the beginning of the year, when an old man who returned from Paris after treatment died on the day he was announced to give a lecture on his recovery of youth." ? ? ? ?

EDITORIALS

TRAFFICKING WITH HEALTH

(Considered and approved for publication by the Council of the State Society, September 8, 1922)

The time has come for some plain speaking. On November 7 the citizens, or more correctly the voters of California, are going to decide the character of medical education, medical practice, hospital service and public health regulation, they wish applied to themselves and their children during at least the next few years. They are going to decide whether education or ignorance shall be the standard under which they will protect the health and welfare of their families. They will determine whether adequately educated law-abiding citizens shall treat them when they are ill, advise them in methods to protect themselves and their families against the invasion of contagion and pestilence, or whether these services are to be relegated to the uneducated, or to the lawless, or to those anti-health charlatans who are openly and flagrantly attacking the standards of experience and education that have been built up through the ages.

We do not believe the time has come when the educated physician must apologize for being educated, or perchance take his orders and laws from ignorant or inadequately educated cultists as health officers, directors of hospitals, and as heads of educational institutions. Should lawlessness and ignorance win in the November election, there will be no legal excuse to maintain the great medical schools of the University of California, of Stanford University, or of the College of Medical Evangelists—the three principal sources of supply of California physicians of the future. These three schools cost the people of the State more than two million dollars a year, and one of the arguments made by some of these cultists is that most of this money could be saved.

Should they win there will be no reason for continuance of the State and municipal health boards nor for health and quarantine laws based upon scientific knowledge of the nature and spread of disease, and enforced for the protection of man and animals. These cultists do not believe in scientific bacteriology or the proven causes and courses of disease. All of the twenty-seven varieties are based upon disproved, unsound theories without a foundation in fact. Some of their fundamental claims are based upon false conceptions of the elementary facts of anatomy and physiology.

The various cults have about thirty so-called schools and colleges in California claiming to prepare students to teach and to practice the healing art. Did you ever see one of these schools? Do you know what they teach; how much; and for how long; and what the actual entrance requirements for students are? Did you ever examine a list of the faculty of one of these schools and compare it with existing educational university standards? If you are an interested citizen, you should do some of these things.

If all the legitimate assets and all of the equipment of all of these schools were combined, they would not have enough to fulfill the legitimate requirements of one school adequately equipped to prepare students to diagnose disease, and discuss and practice the healing art upon an adequate scientific basis. Some commercialized quacks are openly attempting to get charge of the hospitals of the State because, as they assert, with the application of their Science (?) to the patients, the hospitals would soon be empty and much of the millions of dollars they are costing would be saved the taxpayers.

Some people, including a few physicians, health officers and educational officers, profess not to see the dangers in this situation. They are imitating the ostrich, and a very few have allowed their cupidity to obscure their ideals and befog their intelligence. A very few physicians are heard to say, "Why bother about the Chiropractors and the Osteopaths? The more cultists there are, the more business *in the end* for physicians." Thank God, there are but few such in our ranks. When you find one, examine carefully and you will find him connubiating with cultist "runners" or you will find a man whose ideals, ethics, love of his profession and of mankind have turned to brass and tinkle like a cymbal. For over a year and at the present moment certain of these cultists are making strenuous efforts, backed by the power of their political machine and by exhaustive and expensive advertising propaganda, to get on the staffs of hospitals, and their greatest efforts are to control the State, county and municipal institutions. These institutions are considered more vulnerable because, in most instances, they are administered by government officers, sometimes susceptible to political influence. They aim to get in by political power just as they aim to have education legislated into them and a license to practice placed in their hands. If they win in the forthcoming election, why not?

They already have students from among our disabled veterans of the World War studying (?) in their colleges (?) and their tuition being paid for out of your taxes. One of these so-called schools has more government students than have all the legitimate medical schools of California.

The physician who can view the efforts of cultists of one kind and another to destroy the standards of medical education, the practice of medicine and public health without using every effort to combat their activities, forgets his duties as a citizen and misinterprets the greatest function of the true physician. During epidemics the physician works overtime to instruct his patients and friends in the methods of prevention. These organized cults are more menacing to the public health than an epidemic. We may differ in opinions as to the best methods to counteract this menace, but we cannot evade the responsibility of doing our best, both as physicians and as citizens, to protect our fellow citizens against it.

The League for the Conservation of Public Health, by delegation the Section on Medical Economics, Hospitals and Public Health of our State Society, is recognized as our representative

in these matters. Some of their arguments and suggestions are published in this number of the Journal. These and others to be furnished later, as well as the campaign of education proposed by the League, have the unanimous approval of the Council of the State Society. The Council requests all physicians, hospitals and medical agencies to do their duty under the leadership of the League, with the understanding that our campaign is for the betterment of the health of the citizens of the State, and is for the good of us all as citizens.

Physicians and Hospitals of California: In the interests of public health and safety, urge the citizens of your communities to vote No on Anti-Health and Anti-Education initiatives, numbers 16, 20 and 28.

PHYSICIAN OR SANITARIAN?

(Considered and approved for publication by the Council of the State Society, September 8, 1922)

Under this title and commenting upon the report of Mr. George E. Vincent, president of the Rockefeller Foundation for 1921, we read in the editorial column of "Current Opinion," September, 1922:

"The fundamental delusion of the medical profession is that it makes a living from diseases. It studies diseases. The library of disease is enormous. But the real scientific approach to the problem of human welfare is through the study of health and the prevention of diseases. The sanitarian, after all, is a more important advance agent for the millennium than the physician."

This quotation is worth reading again. Press clipping bureaus bring large numbers of other comments that go much farther than this. And where is this one going? Read it again. It is statements of this character and the report of the character of Vincent's that is helping the chiropractors and other cultists, working from another angle, to convince the uninformed people of this country that educated physicians, trained in pathology and in the diagnosis and treatment of disease, are little better than artisans, secondary in importance to the newly created "sanitarian." It ought not to be necessary to belittle the physician nor the methods of his training in order to create a new specialist who, after all, at his best is only a physician. Everyone will applaud legitimate efforts to improve the preventive medical work and the saving of suffering by disease and the prolongation of life. This always has been and is considered by every physician one of his most important functions. It is also a function that never has been discharged and never will be discharged effectively for the great mass of people in any other way than by the physician who is trained in the sciences, arts and humanities necessary for effective work in his field. If the people who are interested in developing public health at the expense of physicians succeed in reaching their goal, what is going to become of the twenty to thirty million people who are sick every year in the United States? The millennium, as propounded by Vincent and other lay doctors, when our efforts and money will be devoted principally to the prevention of illness because there will not be any illness, is a long way off, and it is doubtful whether anything more than a very short step has been taken during the last decade in the direction of that millennium.

FOLLOWING FALSE GODS

(Considered and approved for publication by the Council of the State Society, September 8, 1922)

Physicians of California are getting pretty much "fed up" on itinerant medical evangelists from "the East." Some so-called "Big Men" of our profession find the sphere of their influence too much cramped by their own territory. By proper angling they secure invitations from organizations in California and other western States and make the circuit periodically. In many instances they come preaching medical and public health socialism and usually they are personal propagandists of a familiar species. Their audiences in California are of the same general classes as their followers back home.

There is a serious side to their activities. They influence a certain element, particularly among the younger and more inexperienced physicians, and they are the final authority for lay doctors and uplifters, because socialistic theories are always appealing. The majority of these specialists are opposed to policies of the medical profession, and openly advocate movements that are calculated to make physicians assistants to or "co-operators" with, the self-constituted lay leaders of medical and public health practice.

One of these physicians is reported to have said recently, in effect, that medical social workers should align themselves with the lay social movements and avoid too close contact with the medical profession. Another one has been preaching the same general principle to public health nurses, medical social workers and other technicians. Most of them think much of the title of sanitarian and belittle the physician who is only an M. D. These men usually are quite successful as publicity agents for themselves, and when they are about, the press acts as if the discoverer of a new cancer or tuberculosis cure had just arrived direct from Vienna and the ether waves from the broadcasting stations D. O. and D. C. dance with delight.

The climate of California seems to stimulate these medical evangelists and personal profiteers, and their froth bubbles away faster than it does even in their home towns. It is fortunate for some of them that physicians of the Golden West have a sense of humor.

SUBSIDIZING CULTISM

(Considered and approved for publication by the Council of the State Society, September 8, 1922)

Subsidy constitutes one of the best methods of control of any movement, organization, method or person. It is probably the third most effective of all methods of control, the other two being direct financial control and political control.

All of these methods are extensively applied in medical and public health matters. They are all being extended rapidly in all things medical. It is difficult to say which will prove the most disastrous in the long run—political or subsidy control. It was formerly quite generally thought that noth-

ing could be worse than political control, but with the phenomenal spread of subsidy control of medical education, medical practice and public health into the hands of a few men representing Foundations, and as the dangers of this method become more palpably apparent, many are beginning to wonder what the end will be.

Many organizations, institutions and movements have cheerfully invited subsidy and are continuing to do so without looking beyond the immediate future.

Some recent developments in the gilded fields of subsidy are likely to focus attention on the whole problem. In several instances, misguided philanthropists have offered generous subsidies to institutions in California under the conditions that they provide departments for some cult. We do not know of an instance where such throttling conditions have been accepted. The offers in some instances have attractive coatings designed to deceive. Donations and subsidies look attractive, but in both instances it is well to look carefully at the "strings" before accepting one.

THE HOSPITAL CONVENTION

The Second Annual Convention of the Hospitals of California was held at the Maryland Hotel, Pasadena, September 5, 6, 7 and 8, under the auspices of the League for the Conservation of Public Health. The slogan of the convention was that of the hospital betterment work of the League

"To promote and maintain more and better hospitals wherein educated physicians may render better service to every citizen of every community of California."

From whatever angle viewed, the convention was a striking success. Over three hundred hospitals were represented by over eight hundred delegates and other interested persons. The program as printed was carried out with but few minor changes, and the audience remained intensely interested and even enthusiastic throughout the four days of almost constant discussion. The policy initiated last year at the First Annual Convention was maintained, by which written papers were avoided and the discussion of problems of vital interest to hospital people was substituted.

Both the commercial and scientific exhibits of the convention were of a very high order, instructive and useful.

A number of important resolutions were passed and these, together with a full discussion of the convention, will be published in full in the next number of "Better Health."

The Council of the State Medical Society held two meetings at the same time and place, and there was one meeting of the Council with the officers of the various county medical societies and the section officers of the State Society.

THE ENLARGED JOURNAL

With this issue the JOURNAL enters another stage of development by the addition of 16 more pages, thus increasing the size from 100 pages to 116 pages. This improvement has been made possible by increased advertising and increased subscriptions. Suggestions for further improvement are invited from members and subscribers.

Are Physicians Required to Report All Accidents to the Industrial Accident Commission? (Opinion by Hartley F. Peart, Chief Counsel State Medical Society.)—Some time ago physicians were informed by the Industrial Accident Commission that they were required by law to report all accidents attended by them to the Commission. The Council of the State Society asked Chief Counsel Peart for an opinion as to the legal right of the Industrial Accident Commission to impose this extra work on physicians. Mr. Peart's opinion is as follows:

"Referring to your request for an opinion as to whether or not the Industrial Accident Commission of California is authorized by law to require physicians to report the details of all accident cases which they may be called upon to attend, I beg to advise:

"That Section 21 of the Constitution as amended November 5, 1918, authorizes the Legislature to create and enforce a complete system of workmen's compensation and to create and enforce liability on the part of all persons to compensate any of their workmen for injury or disability incurred or sustained by the workmen in the course of their employment.

"Pursuant to such constitutional authorization the Legislature has passed various Acts. The present Workmen's Compensation, Insurance and Safety Act in its introductory section states that it is intended to make effective and supply a complete system of workmen's compensation, using substantially the language of the Constitution in reference to injuries and disabilities 'incurred by employes in the course of their employment.'

"'Injury' as used in the Act is defined to mean any injury or disease arising out of the employment.

"The compensation provisions of the Act refer to any injury sustained by the employe arising out of and in the course of the employment, and it is clear that the injuries and disabilities referred to in the Constitution and the Statute are only those of employes in the course of their employment.

"In Section 16 of the Act it is provided that 'any physician who shall make or be present at any such examination (an examination where the right to compensation exists in favor of any employe) may be required to report or testify as to the results thereof.

"In Section 19 relating to evidence, it is provided that in the case of the death of an employe 'the Commission may require an autopsy, and the report of the physician performing such autopsy may be received in evidence.'

"Under the safety provisions of the Act and in Section 53A, it is provided that 'every employer of labor, without any exception, and every insurance carrier and every physician or surgeon who attends any injured employes, is required to file with the Commission under such rules and regulations as the Commission may from time to time make a full and complete report of all injuries to an employe arising out of or in the course of his employment,' etc.

"From the foregoing, I conclude that the Commission is not authorized by law to require reports of physicians and surgeons as to every case of accidental injuries or accidental death, which a physician or surgeon may attend. If the circumstances were such as to raise the question as to whether or not the person so attended was injured or killed in the course of employment, then a report should be made promptly, but your question as I understand it, is based upon a blanket notice addressed by the Commission to all physicians requiring them to report fully on all accident cases attended by them. In my opinion, the Commission has not the authority to require such universal reports, in all accident cases for the reasons above stated."

20	*NO. 20. Osteopathic Anti-Health Initiative.* Creates another Special State Board of Examiners composed Exclusively of Osteopaths for special interests of osteophatic colleges and graduates; comically calls itself "self-sustaining" whilst imposing many additional duties on state, county and municipal offices that necessarily create expenses which taxpayers must meet; provides very quick but very dangerous way to make physicians and surgeons of osteophatic graduates who fail to pass present easy State Examinations; grants Board perilous power to license drugless osteopaths to administer narcotics and attempt most serious surgical operations; nullifies present State laws which forbid ostepaths from administering opium, cocaine, morphine and other habit-forming drugs. Vote "No."	Yes	
		No	X

Education Cannot Be Voted Into Them

Two years ago the people of California defeated the osteopathic referendum by a majority of 209,000. This overwhelming verdict of the people emphatically endorsed the law prohibiting osteopaths from prescribing narcotics.

The California Legislature rejected the Osteopathic Act by a two-thirds majority after investigating the absurd accusations of "medical tyranny, injustice and incompetency" made by osteopathic partisans. This osteopathic act is a "misnomer." It has practically nothing to do with osteopathy. It is self-contradictory and wholly at variance with the well-settled definitions of osteopathy in Court decisions, in dictionaries and in osteopathic literature. In co-operation with the other two members of "The Obtuse Triangle" it would create two new Boards of Medical Examiners in California which would divide and confuse the licensing and regulation of physicians and surgeons and drugless practitioners.

It nullifies essential jurisdiction, duties and functions of the present State Board, repeals vital public health safeguards and educational requirements and grants a Board of Five Drugless Osteopaths the inconsistent and dangerous power of licensing osteopathic graduates, without adequate training and education, as physicians and surgeons.

Under the loose terms of this Osteopathic Act, all graduates of osteopathic schools and drugless practitioners graduated from osteopathic schools may be licensed as physicians and surgeons. This offers a very quick but a very dangerous way to make physicians and surgeons.

Osteopaths and Chiropractors base their demand for Special Boards on the erroneous claim that each has discovered "a complete system of healing." Chiropractic IS what osteopathy WAS. We must conclude that the failure of osteopaths and chiropractors to build and conduct hospitals in California is because hospitals form no part of their alleged "Complete Systems."

No physician and surgeon can be properly prepared without adequate hospital training. A little learning is a dangerous thing. Graduates of alleged "complete systems" with incomplete education menace public health.

What IS Osteopathy?

The Supreme Court of California decided: "License to practice osteopathy should not be deemed to authorize the practice of medicine and surgery—requirements for a license to practice osteopathy and for a physician's and surgeon's license have always been different." Another Supreme Court decision says: "Osteopathy administers no drugs; it uses no knife." The Standard Dictionary defines osteopathy: "The treatment of disease without drugs or knife . . ." The Society for the Advancement of Osteopathy says: "Osteopathy is the original science of spinal adjustment." The founder of osteopathy, Dr. A. T. Still, declares, "We are opposed to the use of drugs."

Since 1901 osteopaths have been examined and licensed to practice their drugless method in California. Any osteopathic or other drugless practitioner who has adequate education can now secure a physician and surgeon certificate by passing the higher examination required for physicians and surgeons. During the past eight years 48% of the graduates of osteopathic schools who have taken this examination have failed to pass. In impressive contrast—100% of the graduates of the University of California, of Stanford and the College of Medical Evangelists have passed.

If thousands of untrained "48% graduates" with no hospital preparation or surgical experience are turned loose in California with the unlimited license to prescribe the most dangerous drugs and perform the most serious surgical operations, the damage they can do is immeasurable.

The "48% graduates" need more education, not more Examining Boards. Education can not be voted into them.

Vote "NO" on Anti-Education Initiatives Nos. 16, 20, 28.

COUNTY NEWS

ALAMEDA COUNTY

Del Valle Farm for Tubercular Children—This health farm is operated by a board of directors of which Miss Annie Florence Brown of Oakland is president. Miss Lillian O'Neill, a nurse, is the executive officer. A movement is on foot to further develop this farm and bring it in as a unit of the Alameda County consolidated health program.

FRESNO COUNTY

Fresno County Medical Society (reported by Thomas F. Madden, secretary)—The regular meeting of the Fresno County Medical Society was held at the Commercial Club September 5, 1922. The following members were present: Miller, Tillman, Cross, Montgomery, Aller, J. R. Walker, Kjaerbye, Brown, Pettis, Bell, Sciaroni, Goldberg, Schottstaedt, Mitchell, James, Konigmacher, Trowbridge, Ehlers, Avery, Broemser, Jamgotchian, Milholland, Webster, G. W. Walker and Madden.

James E. Pendergrass of Clovis and Yervant Minas of Fresno were elected to membership.

Frank Hinman of San Francisco discussed "Tumors of the Kidney and Testes." Cross and Konigmacher also discussed the subject.

W. W. Cross, G. W. Walker, D. H. Trowbridge and Thomas F. Madden attended the meetings of State and County Society officers at the Maryland Hotel at Pasadena on September 8 and 9.

Regular meetings of the staff of the Fresno County Hospital were resumed on September 12. Luncheons of the surgical and medical staffs were also resumed.

Guy Manson returned September 6 from a visit to the clinics at Chicago. C. O. Mitchell spent the month of July at the Johns Hopkins Hospital in post-graduate work.

County Hospital Annual Report—The report of this hospital shows progress during the year. A school of nursing has been established. The students secure their academic work from the Junior College of Fresno. A staff has been appointed and organized into departments. The general staff meets once a month and the various departmental staffs each once a month. The report shows the total cost of operating the hospital for the year to have been $266,253.22 or $2.20 per "patient day." The average cost of meals was 19 cents each. There were 139 births and 275 deaths in the hospital. The number of autopsies is not included in this report. Average daily census of patients was 272 or a grand total of 99,280 "patient days."

KINGS COUNTY

Public Health Progresses in Hanford—Hanford has a new health officer in Dr. Albert G. Bower, who took office July 1. Dr. Bower, who has had considerable public health experience in the Army, is an enthusiastic organizer and he is working zealously for the development of a full-time health department in Hanford.

LOS ANGELES COUNTY

New Medical Teaching Center Contemplated—It is reported that the $10,000,000 campaign of the University of Southern California is receiving hearty support. Plans for the use of these funds include provision for a medical school and teaching hospital at a cost of $3,500,000. Dr. Wesley W. Beckett, member of the board of trustees of the University is quoted as saying that there is no place in the United States so far removed from a medical school as Los Angeles.

California Lutheran Hospital—It is reported that this hospital will shortly begin the construction of a nurses' home to cost approximately $250,000. The Anita M. Baldwin Clinic for Children building as part of the hospital has just been completed.

Pasadena Requires Examination of Food Handlers—During the month of July more than 550 food handlers were examined in the Pasadena City Health Department in accordance with the requirements of a local ordinance. Pasadena is the only city in California which requires that all handlers of foodstuffs must pass a satisfactory physicial examination, showing that they are not suffering from communicable diseases.

Pasadena Preventorium—This new venture is located on an eight and one-half acre tract of land. The building is to cost $35,000 and is to be erected shortly. The Preventorium will be incorporated under the laws of the State and will be conducted by the management of the Pasadena Dispensary. Mrs. Irving Sturgis is president of the organization.

MONTEREY COUNTY

New Hospital for Salinas—The Red Cross Health Center property at Salinas, Monterey County, has been sold to a group of physicians and will be converted into a hospital in the near future. Doctors E. W. and W. H. Bingaman of King City, A. S. Lineer of Soledad, W. Rollin Reeves, Edwin W. Reeves, D. B. Wylie, T. C. Edwards and J. A. Beck of Salinas, are the prime movers in this new enterprise.

ORANGE COUNTY

Santa Ana Hospital—Mr. A. B. Wastell has been engaged to do the promotion and organization work for the new Santa Ana Hospital. Mr. Wastell has just successfully completed a similar service for the people of San Jose and the San Jose Hospital is well on the road to completion.

RIVERSIDE COUNTY

Riverside Community Hospital—Mr. L. B. Saunders, formerly of Baltimore, has been appointed director of the hospital and is now on duty.

SACRAMENTO COUNTY

Flitcroft Hospital—It is reported that a new twenty-room hospital, located at 3014 M street, Sacramento, will shortly be completed by Arthur Flitcroft. The hospital is all concrete and brick construction and is being fitted up especially for maternity and surgical cases. The site for building represents an investment of $50,000. According to the report, it will be ready for patients in October.

SAN FRANCISCO COUNTY

San Francisco County Medical Society—Presentation of a portrait of the late Dr. Harry M. Sherman to the San Francisco County Medical Society (by his widow, Mrs. Sherman); address of acceptance by Douglas W. Montgomery, M. D.—Through the thoughtfulness of Mrs. Sherman we are presented tonight with an excellent portrait of her husband, the late Harry M. Sherman, so many years an honored member of our Society. The gift was accompanid with the request that it be hung beside that of his friend, George Chismore. And indeed, this is most appropriate and typifies a long and close friendship between two men having like professional ideals and like democratic views of government, and of social equality before the law, and who carried into their everyday life these same principles of fairness and justice, both to themselves and to their neighbors.

Sometimes, like a flash of lightning, a look or gesture will illuminate the relationship between two men. One day I happened to enter Chismore's room with Sherman. Chismore, who suffered a long, trying illness before his death, was in a reclining chair with that look of beatitude and peace which so transforms some elderly people. Sherman kissed the old man on the forehead, and the return look of affection I shall never forget.

As I went away, I reflected that these two men had known one another intimately for years, and in fact, had grown old together. A friendship such as evinced by them could only be the result of a mutual esteem, resting on honest, solid traits of character, which are only too infrequently met with in this rude world.

It is indeed sweet and commendable to give these mourning duties, which we are here this evening to fulfill, to one who throughout his active life never ceased to take a deep interest in the affairs of this Society. He, together with Philip Mills Jones and Dudley Tait, did more than any others to develop its ethical side, and to make the Society what it is, and to set it on its road for what it may become.

While industrious in developing the form and government of the Society he also was not slack in furthering its scientific work. Some of the best surgical papers I have ever listened to were contributed by him. He was notably a fine demonstrator of material, and I often delighted to compare his work in this assembly and in the Academy of Medicine with that of Adolph Barkan as I heard it in the German Medical Society. These two men presented their cases or theses excellently.

It is well that we should have these portraits of those who have gone before into the secret house of death, and it is to be hoped that in time we may have a dwelling of our own where they may be permanently hung. Such a habitation, with its stories of the past, is of inestimable benefit to the profession in developing a medical tradition and solidarity. With this solid background, a good organization and the will to do this Society may look forward to a bright future full of beneficent endeavor.

The portrait of Harry M. Sherman possesses a peculiar value to those who knew him, in that it truly depicts his character. It shows the open, straightforward countenance, with head held erect on a good neck, based on fine, square shoulders. No man I ever knew showed so clearly in his countenance the inner workings of his mind. There was nothing to hide, for he was the personification of frankness.

In speaking of his appearance an interesting incident occurs to me. Soon after his demise Leo Newmark, one of his sincerest admirers, sent me a photograph of the bust of Marcus Aurelius, the great, stoic emperor of Rome, inquiring if I did not find a certain resemblance between it and Anax Andron, and indeed, especially in the upper part of the face, both in features and expression, the likeness is striking. Anax Andron, or King of Men, was a name given to Sherman by Newmark, partly as indicative of his grand manner, and, more especially, to convey the sincere regard he had for his character and attainments, and for his integrity, which was carried to the length of being almost a peculiarity; and for the iron rule he maintained over himself. In this self-rule and in his determination to carry through any project he had undertaken he resembled his distinguished contemporary, the late Levi C. Lane.

It was a cruious fate that accompanied both these men, that the work that they most ardently wished to accomplish should be partly marred by associates who seemed absolutely incapable of appreciating their endeavors and purposes.

As an instance of the masterful way he had of managing himself, take his attitude during the war.

At a time of life when most men seek their ease and routine work becomes a drudgery, he devoted a large share of his time to the examination of recruits, and when he was given a commission he even gladly took it as being his duty, although it meant the closure of his office. His associate was also away in the Army, and he was fully aware of the serious effect any continuous absence would have on his affairs.

He accomplished a fine day's work for this Society, for the profession in general, and for himself. I say for himself, but in no selfish way, for he was one of those who entwined his general culture, with which he was well endowed, with his medical work, so as to embellish it and to make it a real part of his intellectual development.

We are here tonight to honor Harry M. Sherman, but honor is an external adjunct and pertains rather to the honoror than to the person honored. We can not do anything to change Harry M. Sherman, he has gone beyond the boundaries of time and space, but by honoring him a change is wrought in ourselves, and by a contemplation of what he was, both in excellencies of character and in the purpose and accomplishment of his work, we clarify our own souls and stimulate ourselves to follow his example. Truly death has no dominion over such a life.

Diathermy in Ophthalmology—In discussing this subject at the meeting of August 22 Kaspar Pischel stated: "While in the usual hot application the heat is applied to the surface only, in diathermy the heat is created in the tissues itself by alternating high frequency electric current. The temperature in the vitreous can be raised to 40.7 C. — 105.3 F. — without injury, thus creating a marked hyperaemia inside the globe, as proved by the albumen contents of the aqueous." Using Dr. Koeppe's book on "Diathermy of the Eye" as a guide, Dr. Pischel discussed the indications for its use and advised to try this new therapeutic measure. Many other valuable papers were presented to the Society during August and September, but abstracts have not been furnished the Journal.

St. Joseph's Hospital (San Francisco) Staff Meeting—At the August meeting of St Joseph's Hospital staff, L. Crow gave an interesting illustrated talk on "Early X-ray Signs in Medical and Surgical Chests." Dr. L. Crow is now in charge of the Roentgenological Department of St. Joseph's Hospital and brings to it his experience in a similar capacity at the San Francisco and Southern Pacific Hospitals. With two sisters as his technicians the department has been made attractive and efficient. A. S. Musante, president of the staff, reported upon the success of the first class in the School of Nursing, and the usefulness of the "In" and "Out" register. Progress in the program for the construction of the second concrete unit of the hospital was made. New patients for July were 175 (surgical 111, medical 34, obstetrical 15, and X-ray and laboratory 14); deaths 9, and discharged 161 (recovered 115, improved 32, unimproved 5). Case records were discussed by P. Collischon, cerebral hemiplegia; R. H. Berndt, prostatic hypertrophy, and Walter Smith, eclampsia.

SAN JOAQUIN COUNTY

San Joaquin County Medical Society (reported by Dewey R. Powell, secretary)—The regular meeting of the San Joaquin County Medical Society was held at the Receiving Department of the State Hospital on the evening of September 8. Those present were: H. Smythe, B. J. Powell, C. D. Hollinger, J. D. Dameron, Grace McCoskey, L. Dozier, J. E. Barnes, A. H. McLeish, J. Hull, C. R. Harry, W. Freidberger, C. F. English, D. R. Powell with L. R. Taussig and Alfred Spalding of San Francisco as guests and speakers of the evening.

The secretary announced with deep regret the death of Dr. H. N. Cross on August 18, 1922, a member of the Society and stated that a floral piece and message of condolence had been sent to the surviving widow.

Alfred Spalding of Stanford University spoke on "Vesico-Vaginal Fistulae." Spalding illustrated his remarks with lantern slide pictures which showed very conclusively the anatomical relations and the problems which have to be solved in correcting such fistulae. He emphasized the importance of dissecting out thick layers of fascia and overlapping the same in order to get a firm support. The paper was discussed by Doctors Dameron, Harry,

English and others and Spalding answered several questions in his usual clear, concise manner.

L. R. Taussig of the University of California staff spoke on the subject of "The Radium Treatment of Carcinoma of the Lip." He was quite convinced of the advantages of the use of radium in the early stages of carcinoma on account of less scarring and the avoidance of surgical procedure. On the other hand, the discomfort of the treatment was a disadvantage and the inability to obtain a specimen for exact pathological diagnosis. Taussig showed several lantern slides of both early and advanced cases of carcinoma and stated again that the benefit of radium could only be expected in the early cases. The paper was discussed by several members present who concurred in the desirability of giving radium a chance in the early stages of carcinoma.

Buchanan Sanitarium, Lodi—It is reported that a new six-room maternity department is just being completed for this institution. The hospital contains twenty rooms for patients. The hospital is a private institution operated by R. A. Buchanan of Lodi.

SAN LUIS OBISPO COUNTY

Harrison Neal, M. D., died in March at San Miguel, California, at the age of 87. Dr. Neal was a graduate of Jefferson Medical College and spent many years in practice at Paso Robles.

SANTA BARBARA COUNTY

Santa Barbara County Medical Society (reported by P. C. Means, secretary pro tem)—The Society held its August meeting at the Cottage Hospital, President W. J. Mellinger presiding. S. E. Sansum read a "Preliminary Report on Insulin." After reviewing the diet in diabetes he gave a short history of the initial work in the diagnostic and therapeutic value of insulin in diabetes by J. R. MacLeod. Sansum presented the histories and charts of nine cases in which he had used this new pancreatic extract with encouraging results. G. W. Jean presented cases of cataract and sac operations. This was the largest meeting of the year, with three-fifths of the membership present. The secretary, A. C. Soper, was absent at the M. R. C. training camp at Monterey.

County Hospital—The annual report of Mr. C. G. Vandever, superintendent of this hospital, has been submitted. The cost of operating the hospital for the year was $78,914.12 or $2.40 per "patient day." Patients were divided as medical, 276; surgical, 170; tubercular, 78; contagious, 26; maternity, 29; births, 22; emergency, 3; custodial, 16. The hospital has grown from 216 admissions in 1917 to 620 in 1922.

SONOMA COUNTY

Hospitals, Clinics and Laboratories (reported by N. Juell, secretary)—Sonoma County Hospital, sixty beds, located at Santa Rosa; matron, Miss Schwab; County physician, F. O. Pryor.

Mary Jesse Hospital, twenty beds, located at Santa Rosa; matron, Mrs. Williamson.

Santa Rosa General Hospital, twenty-eight beds; Miss Levy, superintendent; H. G. Guttermuth, owner and manager.

Dr. Fisher's Sanitarium, located at Santa Rosa, seven beds; C. E. Fisher, owner and manager.

Ovalcrest Convalescent Home at Santa Rosa, Major Brandon, owner and manager.

Beaucourt Convalescent Home at Santa Rosa; C. H. Stevens, owner and manager.

Santa Rosa also has three Maternity Homes owned and operated by Mrs. Nelligan, Mrs. Manion and Mrs. Shaafsma, respectively.

Santa Rosa Clinical Laboratory, owned and operated by A. B. Hewitt.

Santa Rosa X-ray Laboratory, including radium and electrical therapeutics, owned and managed by O. N. Young.

Santa Rosa Sanitarium, thirty beds; owned and managed by C. B. Schoenfeld.

Cloverdale General Hospital, ten beds; owned and managed by W. C. Shipley.

Healdsburg General Hospital, twelve beds; owned and managed by Mrs. Marcella Jones.

Petaluma General Hospital, eighteen beds; owned and managed by Doctors Peoples and Lunsden.

Petaluma Hillside Hospital, fourteen beds; owned and managed by Mr. Carl Haderman.

Cherry Hill Hospital, Petaluma, eight beds; owned and managed by Mrs. J. F. Jones.

Burke's Sanitarium, Burke postoffice; owned and managed by Dr. Burke.

Baby Clinics—Santa Rosa, Petaluma, Sebastopol and Sonoma. These clinics are operated by the Children's Welfare Society and the Red Cross.

Dental Clinics at Santa Rosa, Petaluma, Sebastopol and Sonoma. These clinics are operated by the Sonoma County Public Health Association.

Community Clinic at Santa Rosa. This clinic meets twice a month and is conducted by F. O. Butler and Mr. Ordahl, psychologist of the Sonoma State Home.

Sonoma State Home, Eldridge, Sonoma County. F. O. Butler, medical director.

Sonoma State Home—M. Covey, formerly of Philadelphia, has been appointed assistant director to F. O. Butler, medical director of the Sonoma State Home at Eldridge.

Lafayette L. Wilson, president of the Sonoma County Medical Society, died August 16 at his home in Sebastopol.

TULARE COUNTY

Tulare County Health Center—A published report of the activities of this free health Center shows that during the past month 136 patients were cared for from ten towns in the county. The physicians of Tulare County rendered the medical service.

Hospital Project for Dinuba—Doctors Paul R. Walters, Edgar Brigham, V. B. Gregory, A. N. Loper, and Louis Seligman are reported to be behind the project to secure a new hospital of from fifteen to twenty beds for Dinuba.

Board of Medical Examiners News—The Board of Medical Examiners announces that the results of the written examination held in San Francisco in June, show that eighty-five, including graduates of the College of Osteopathic Physicians and Surgeons of Los Angeles, passed the physicians and surgeons' examination. The highest mark (93 per cent) was made by Randolph G. Flood, a graduate of Stanford Medical School, 1922.

The University of California Medical School sent forty-two graduates for examination without a single failure, a record that has been maintained for over ten years.

Twelve graduates of Chiropractic colleges passed the Drugless Practitioner written examination. Mary J. Murphy, D. C., a graduate of the Western College of Chiropractic, San Francisco, made the highest grade (85 per cent), of the Chiropractic graduates.

During 1922, graduates of Chiropractic schools have successfully passed the written examination as follows: California Chiropractic College, 2; San Francisco, 2; Kinetic College of Chiropractic, Los Angeles, 3; Los Angeles Chiropractic College, 4; Pacific College of Chiropractic, Portland, Ore., 1; Western College of Chiropractic, San Francisco, 11.

Electronic Reactions of Abrams—Those who may be interested in this apparently profitable commercial enterprise will find interesting reading in the Boston Medical and Surgical Journal, August 17, 1922, pages 268 to 270.

28	*No. 28. Anti-Vivisection Anti-Health Initiative* A destructive measure that would increase tuberculosis among the children of California, stop the production of certified milk; ruin the canning industry, expose to fatal food poisons people who use California canned and other foods; jeopardize the poultry, dairy, livestock and agricultural interests; invite epidemics, plagues, quarantine and commercial disaster; shackle scientific practice and progress; prevent effective work of health boards, veterinarians, bacteriologists, research workers; *debar forever* educated physicians and surgeons who dare to render life-saving scientific service to the people of this State, and penalize the scientific study, prevention, cure and control of diseases that attack man and animals. Vote "NO."	Yes	
		No	X

Not that We Love Animals Less, But that We Love Humanity More

The people of California defeated the destructive anti-vivisection measure two years ago by a majority of 254,000, not that we love animals less, but that we love humanity more.

This absurd Anti-vivisection act would injure animals as much as man. It would doom animals to ravaging plagues and prevent their real friends from using scientific means to save them.

It prohibits the effective scientific methods by which hog cholera, anthrax, scab, blackleg, chicken cholera, Texas fever and various animal diseases are discovered, prevented and cured.

It prohibits the manufacture of serums and vaccines for the treatment and prevention of diphtheria, smallpox, hydrophobia and lockjaw.

The preventive and curative work of physicians, the safety of surgery, the conquest of cancer, the prevention and cure of tuberculosis, syphilis, influenza, infantile paralysis and many other diseases are dependent upon ("vivisection") animal experimentation.

Ninety-five per cent of animal experiments are to determine purity and safety of drugs used by physicians, dentists and veterinarians for the benefit of man and animals.

Present laws of California adequately protect animals and prohibit inhumane treatment. There is no cruelty to animals in the laboratories of California. The scientific workers are devoted to advancing the welfare of men and animals.

The laboratories are open. The minds of the anti-vivisectionists are closed. They would substitute silly sentiment for beneficent scientific methods.

Combined with the chiropractic and osteopathic anti-health initiatives they form "THE OBTUSE TRIANGLE" which would permit the unqualified to practice unscientifically and prohibit the qualified from practicing scientifically.

The inhumane anti-vivisection measure would *debar from practice forever* physicians and surgeons who use a few guinea-pigs to save the lives of many people. Anti-vivisectionists forget that people "are of more value than many sparrows."

The truest lovers of animals recognize the need and value of animal experimentation. Ernest Harold Baynes, of whom President Roosevelt said, "He has the highest reputation in all forms of work for the care of animal life," presents and answers the vivisection question this way: "The whole question is one of proportion. If you could see two hundred and fifty mothers lined up with their babies in their arms, would you condemn them to painful death . . . in order to save from less painful death an equal number of guinea-pigs, rabbits and billy goats—or even dogs, much as we love them? Of course you wouldn't—nor would anyone who has imagination enough—to think straight and to see things in their proper proportions. . . . . It is safe to say that for every animal used in experiments a hundred human lives were saved in the World War alone."

Those who vote for this anti-vivisection measure must place a higher value upon one timid rabbit than upon a hundred brave men.

Who will vote to spread tuberculosis among the children of California? Tuberculosis is spread to children by milk and dairy products from tuberculous cattle. The control and eradication of tuberculosis among cattle would be prohibited by this anti-vivisection measure. Animal experimentation is indispensable to insure safe milk and pure food. Anti-vivisection would injure the people, animals and resources of every community of California without benefiting anybody or anything. Vote "NO" on Anti-Health Initiatives Nos. 16, 20, 28.

THE SOUTHERN CALIFORNIA MEDICAL SOCIETY

(Reported by William Duffield, President)

From a little leather-bound book, in a very clear and elegant penmanship, may be found the following: "At a meeting of the Los Angeles County Medical Society, April 6, 1888, W. G. Cochran offered the following resolution which was adopted: 'Resolved, That a committee of three be appointed to communicate with the regular physicians of Southern California to ascertain their wishes in regard to the organization of a District Medical Society.' In accordance with the resolution the president, G. W. Lasher, appointed as such committee W. G. Cochran, H. G. Brainerd and John L. Davis. The committee met and prepared a circular, explaining the purpose of the resolution; this circular together with an addressed postal card for response was then, on April 14, 1888, sent by the committee to about two hundred and fifty physicians of Southern California, including the counties of Kern, Los Angeles, San Bernardino, San Diego, San Luis Obispo, Santa Barbara and Ventura. In response to the circular about eighty replies were received, all, with two or three exceptions, favoring the proposed organization. On May 4, 1888, the committee made its report to the Los Angeles County Medical Society. Its action was approved and the committee was continued and authorized to call a meeting for the purpose of organizing a **District Medical Society.** The committee thereupon issued the call for Los Angeles, June 8, 1888. The meeting took place in Hotel Hollenbeck of Los Angeles on June 8, 1888, and about eighty physicians were present during the day."

And this is the story of the beginning of the Southern California Medical Society. Most of those who comprised that first eighty are no longer with us. But their good lives. **The District Medical Society** has brought a fellowship, a unity of effort for the good of the people and for the profession, a neighborliness, which could not be brought about by the County Society nor by the State Society in this great big empire of a State. It has never encroached upon the domain of either of its relatives, but has always brought the whole family into a better relationship twice a year.

This society has a fine record for clean, honest, scientific service, as well as for the fellowship, too. When one reads the pages of its history, one sees that these old fellows who founded it, and who were part of its earlier history, have very good reason for watching the service of those who have succeeded them. Indeed, they are very jealous of that past, and they are going to keep a sharp eye on the present of the society.

It would be interesting for the Journal to give some of the early history as one will find it in these carefully penned pages, for we know there are many members of our big State family who reach back to those days in sacred memories. There is a fine sentiment in it aside from the history—and what is there in life that is worth while that hasn't a lot of sentiment for seasoning.

Well, anyway, the next semi-annual meeting of the Southern California Medical Society—the "District Society"—will be held in Los Angeles on Friday and Saturday, November 3 and 4. Dr. Egerton Crispin, the secretary, has prepared a very excellent program—one good enough for any society, anywhere. Among the visiting speakers will be Louis Wilson, of the National Board of Medical Examiners and Dean of the Graduate School of the University of Minnesota, who will talk on the needs of the medical profession in their relation to the public, and the problems in medical education in their relation to the university and the public; E. C. Rosenow, Professor of Bacteriology in the Graduate School of the University of Minnesota, and Mayo Foundation, will present new research work in bacteriology and experimental medicine; Walter Alvarez of San Francisco will give "The Results of Clinical Observations and Blood Pressure Studies in Sixteen Thousand High School and University Students." A large number of other excellent papers by men of the "District," from Santa Barbara to Tia Juana and Mexicala.

In this society the discussions are given equal prominence with the papers, and the members who have accepted places on the program for discussion have been put in touch with the original paper, and have had much time in which to prepare their presentations. Special clinics will be held at many of the hospitals on the forenoon of the first day of the meeting. I regret my inability to furnish the Journal with the complete program, but that seems impossible at this writing. However, everybody may be assured that the two days will be crowded with excellent features from start to finish—days which will be most profitable to those who attend.

And all regular physicians are cordially invited.

BOOKS RECEIVED

The Practice of Medicine. By A. A. Stevens, M. D., Professor of Applied Therapeutics in the University of Pennsylvania; Professor of Therapeutics and Clinical Medicine in the Woman's Medical College of Pennsylvania. Octavo of 1106 pages. Philadelphia and London: W. B. Saunders Company. 1922. Cloth, $7.50 net.

Radium Therapy. By Frank Edward Simpson, A. B., M. D., Professor of Dermatology, Chicago Policlinic. 391 pages with 166 original engravings. St. Louis: C. V. Mosby Company. 1922. Price, $7.

The Healthy Child From Two to Seven. A handbook for parents, nurses and workers for child welfare. By Francis Hamilton Maccarthy, M. D. 235 pages. New York: The Macmillan Company. 1922.

A Textbook of Clinical Periodontia. A study of the causes and pathology of periodontal disease and a consideration of its treatment. By Paul R. Stillman, D. D. S., and John Oppie McCall, A. B., D. D. S. 240 pages. New York: The Macmillan Company. 1922.

The Law of Vital Transfusion and the Phenomenon of Consciousness. An account of the necessity for and probable origin of the development of sex and of the development of the conscious state in the evolution of the organic world, with a preliminary statement of fundamental cosmical principles. By Charles J. Reed. San Francisco: Occidental Publishing Company. 1921.

Hay Fever and Asthma. Care, prevention and treatment. By William Scheppergrell, A. M., M. D. 274 pages. Illustrated with 107 engravings and one colored plate. Philadelphia and New York: Lea and Febiger. 1922. Price, $2.75.

Nutrition and Specific Therapy. By Dorothy E. Lane, S. B. 185 pages. New York: The Macmillan Company. 1922.

Readings in Evolution, Genetics and Eugenics. By Horatio Hackett Newman, Professor of Zoology in the University of Chicago. 512 pages. Chicago: University of Chicago Press. 1921.

Paracelsus. His personality and influence as physician, chemist and reformer. By John Maxson Stillman, Professor of Chemistry Emeritus, Stanford University. Chicago and London: The Open Court Publishing Company. 1920. Price, $2.

The Life of Jacob Henle. By Victor Robinson, M. D. 117 pages. New York: Medical Life Company. 1921.

The Eighteenth Amendment. And the part played by organized medicine. By Charles Taber Stout. 216 pages. New York: Mitchell Kennerley. 1921.

American Red Cross Work Among the French People. By Fisher Ames, Jr. 178 pages. New York: The Macmillan Company. 1921.

Physical Diagnosis. By W. D. Rose, M. D., Lecturer on Physical Diagnosis and Associate Professor of Medicine in the University of Arkansas. Second edition. 736 pages. 309 illustrations. St. Louis: C. V. Mosby Company. 1921. Price, $8.50.

History and Bibliography of Anatomic Illustration in its relation to anatomic science and the graphic arts. By Ludwig Choulant. Translated and edited by Mortimer Frank, B. S., M. D. 435 pages. Chicago: University of Chicago Press. 1920.

Smithsonian Institute Bureau of American Ethnology, Bulletin 73; Early History of the Creek Indians and Their Neighbors. By John R. Swanton, Washington, Government Printing Office 1922.

Same, Bulletin 75; Northern Ute Music. By Frances Densmore, Washington, Government Printing Office, 1922.

A Text Book of Gynecology. By James Young, D. S. O., M. D., F. R. C. S. (Edin.), Assistant Physician, Royal Maternity Hospital; Lecturer in Clinical Gynecology and Clinical Obstetrics, Edinburgh University; late University Clinical Tutor in Surgery; Gynecologist, Provident Dispensary, Edinburgh; Examiner, Central Midwives Board of Scotland, etc. 183 Illustrations. New York: The Macmillan Company. London: A. & C. Black, Limited.

Endocrine Glands and the Sympathetic System. By P. Lereboullet, P. Harvier, H. Carrion, A. G. Guillaume. Translated by F. Raoul Mason, M. D., Instructor in Pediatrics, New York Post-Graduate Medical School and Hospital; Assistant Attending Physician, Willard Parker Hospital; Assistant Pediatrist, New York Post-Graduate Medical School and Hospital, Out-Patient Department; Assistant Attending Physician, Babies' Ward, New York Post-Graduate Medical School and Hospital. With the collaboration of Daniel R. Ayres, A. B., M. D., Assistant Professor of Gynecology, New York Post-Graduate Medical School and Hospital; Assistant Visiting Obstetrician, City Hospital, New York. Philadelphia and London: J. B. Lippincott Company. 1922.

Diseases of the Thyroid Gland. By Arthur E. Hertzler, M. D., F. A. C. S., Professor of Surgery in the University of Kansas School of Medicine; Surgeon to the Halstead Hospital, Halstead, Kansas; Surgeon to St. Luke's Hospital and St. Mary's Hospital, Kansas City, Mo., and to Provident Hospital, Kansas City, Kansas. With a chapter on Hospital Management of Goiter Patients, by Victor E. Chesky, A. B., M. D., Associate Surgeon to Halstead Hospital. 106 original illustrations. St. Louis: C. V. Mosby Company. 1922.

Obstetrical Nursing. A Text Book on the Nursing Care of the Expectant Mother, the Woman in Labor, the Young Mother and Her Baby. By Carolyn Conant Van Blarcom, R. N., formerly Assistant Superintendent and Instructor in Obstetrical Nursing and the Care of Infants and Children at the Johns Hopkins Hospital Training School for Nurses; Author of "The Midwife in England." With 200 illustrations and 8 charts. New York: The Macmillan Company. 1922.

Food, Health and Growth. By L. Emmett Holt, M. D., LL. D., President Child Health Organization; formerly Professor of Diseases of Children in the College of Physicians and Surgeons, Columbia University, New York. A discussion of the nutrition of children. New York: The MacMillan Company. 1922.

X-Ray Dosage in Treatment and Radiography. By William D. Witherbee, M. D., Radiotherapist, Presbyterian Hospital, New York; formerly Roentgenologist, Rockefeller Institute, and John Remer, M. D., Radiotherapist, New York Hospital, New York; Consulting Radiotherapist, United Hospital, Port Chester. New York: The MacMillan Company. 1922.

Surgical and Mechanical Treatment of Peripheral Nerves. By Byron Stookey, M. D., Associate in Neurology, Columbia University; Assistant Professor of Neurosurgery, New York Post-Gradate Medical School and Hospital. With a chapter on Nerve Degeneration and Regeneration by G. Carl Huber, M. D., Professor of Anatomy, University of Michigan. Octavo volume of 475 pages with 217 illustrations, 8 in color and 20 charts. Philadelphia and London: W. B. Saunders Company. 1922. Cloth, $10 net.

Obstetrics for Nurses. By Joseph B. De Lee, M. D, Professor of Obstetrics in the Northwestern University Medical School, Chicago. New (sixth) edition, entirely reset. 12mo of 525 pages, with 245 illustrations. Philadelphia and London: W. B. Saunders Company, 1922. Cloth, $3 net.

Diseases of the Skin. By Henry H. Hazen, A. B., M. D., Professor of Dermatology in the Medical Department of Georgetown University; Professor of Dermatology in the Medical Department of Howard University; sometimes Assistant in Dermatology in the Johns Hopkins University. Second edition, 241 illustrations. St. Louis: C. V. Mosby Company, 1922.

BOOK REVIEWS

Management of the Sick Infant. By Langley Porter and William E. Carter. St. Louis: C. V. Mosby Company. 1922.

The proper construction of a textbook or of any book of reference should be based directly on the needs of the people who are expected to use it. The neglect of this point of view is responsible for the small value of many—perhaps most—of the numerous texts which are turned out every year. The majority of them are written by teachers and addressed to their students and bear the mark of the class-room rather than of actual life and reality. Medical books especially suffer from this fault. Too few of them are put out by the clinician for the clinician. Too few of them readily yield the answer to the questions for which the practitioner turns to their pages. He may wish to know to what diagnosis a particular set of unusual symptoms point, or what is a better treatment than his own for a given disease, or the details of a therapeutic technique with which he is familiar with only in principle. In the first case, consulting the average book he will find that he must read over the descriptions of several diseases in the same general group; in the second case, he is apt to find the customary "standard" methods with which he is already familiar, and in the third case, he will rarely find any help at all. It is a frequent comment that textbooks serve to perpetuate the mistakes of their predecessors. Certainly most of them are not based entirely or even in large part on the direct experience of their authors. Because it was an exception to this rule, Osler's "Practice of Medicine" took the medical world by storm with its freshness and its originality of observation, while maintaining a critical appreciation of the old.

It is to the credit of the Pacific Coast that its most recent—and one of its few—medical texts should bear the same stamp of reality and should be so intelligently planned to meet actual needs. It can be at once recommended to any practitioner

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tics, is unique in textbooks in English, and, indeed, is not equalled for completeness in any language. There is no reason why the general practitioner, acquainted with the principles of medical technique, should not be able from a careful perusal of this book to carry out the methods which hitherto have been left to a few specialists. Further, his nurse by referring to the book herself will be able to have all the necessary equipment prepared for him in advance—a considerable saving of time.

The reviewer has for a number of years considered that there were only two American texts which were indispensable to the practicing pediatrist—that of Holt and Howland, and that of Morse and Talbot. To these he is now inclined to add that of Porter and Carter because of its practical utility and its freshness of matter and because it offers material which is not to be found elsewhere in readily available form. H. K. F.

Principles of Immunology. By Howard T. Karsner, M. D., and Enrique E. Ecker, Ph. D. 309 pages. Illustrated. Philadelphia and London: J. B. Lippincott Company. 1921.

This is a valuable guide for students or practitioners of medicine who desire a concise statement of the facts and the hypotheses concerning resistance to infection. The general arrangement of the text is excellent and the difficult subject is presented in a remarkably clear manner. Facts established by experimental studies are detailed and supplemented by brief discussions of the practical and theoretical bearing of the phenomena upon disease and resistance in man. In twelve chapters the following subjects are reviewed: Virulence of organisms, general conditions of infection and resistance, general phenomena of immunity, toxins and antitoxins, agglutinins and precipitins, cytolysins, cellular resistance, complement fixation, application of complement fixation to the diagnosis of disease, hypersusceptibility, hypersusceptibility in man and defensive ferments. The practical application of immunology to the prevention and cure of disease has been summarized in three appendices, dealing with the therapeutic employment of blood serums, prophylactic vaccination and vaccine therapy. Throughout the text valuable information is given relative to the technical execution of experiments. Some of the customary laboratory procedures are explained and enhanced by drawings or colored plates. This book is a valuable addition to any medical library. K. F. M.

Clinical Diagnosis. A textbook of clinical microscopy and clinical chemistry for medical students, laboratory workers and practitioners of medicine. By Charles Phillips Emerson, A. B., M. D. 5th ed. 726 pages. Illustrated Philadelphia and London: J. B. Lippincott Company. 1921.

It is ten years since the last edition of this book appeared. In its preface, the author condemns the present separation of laboratory and ward, and "No matter how successful a man may be, he has no right to entrust his laboratory work entirely to others. . . . . The one who takes the history of the patient and makes the physical examination is the only one who can interpret correctly a laboratory finding." Herein lies the value of this book, one of the best on clinical diagnosis.

L. E.

The Surgical Treatment of Non-Malignant Affections of the Stomach. By Charles Greene Cumston, M. D., and Georges Patry, M. D. 349 pages. Philadelphia: J. B. Lippincott Company. 1921.

There is nothing new in this book, but it is a compilation founded on a wide study of the literature and personal visits of the authors to a great many foreign clinics. L. E.

Tuberculosis in Infancy and Childhood. By J. Claxton Gittings and Frank Crozer Knowles and Astley P. C. Ashhurst. 273 pages. Illustrated. Philadelphia and London: J. B. Lippincott Company. 1922.

This book is a most concise, though at the same time complete, presentation of tuberculosis in infants and children. In slightly over 250 pages, the authors present a short historical review, general aspects of the disease and detailed description of the disease in the several organs; also instructions for the application of various tests.

To tuberculosis of the skin (F. C. Knowles) is given a very interesting and extensive chapter, whereas bones and joints have been treated rather too briefly. The notes on treatment of tuberculosis

are in general sane and practical. However, advice somewhat exceeds the margin of safety in openly advocating "euthanasia by toys" in certain cases.
M. H. L.

The Place of Version in Obstetrics—By Irving W. Potter, M. D., F. A. C. S. 138 pages, with 42 illustrations. St. Louis: C. V. Mosby Company, 1922. Price, $5.

Unfortunately, only about fifty pages of the one hundred and forty of this monograph contain personal experiences of the author. Some seventy pages are devoted to the history of version. This portion of the volume is unquestionably the more interesting one, since it quotes many of the classical authorities verbally. As far as the chapters on technique are concerned, there is nothing new that has not been done in most every well conducted maternity. There is little argument offered and less proof given that the author's contention of delivering all women by version and extraction can be accepted for general teaching. Like in all other fields where technical skill can be developed to the finest point by a large amount of experience, so in obstetrics Potter has shown that this can be done without undue risk to the patient and the child. It is interesting that his percentage of Caesarean Sections runs close to 10 per cent of all cases delivered.

In a monograph like this one would expect the author to give his complete experience with this work rather than just a very meager discussion of the work of two years.

When reading the last chapters one can not help but feel that the author was hurrying to finish his volume for the press. I refrain from discussing the style of presenting the subject.

There are many salient points made in this book that are worth while to scrutinize. Aside from that and the historical introduction, this monograph is decidedly unsafe in the hands of students and beginners. L. A. E.

Clinical Electrocardiography—By Frederick A. Willius, B. S., M. D., M. S., in medicine. One hundred and eighty-eight pages, with 185 illustrations. Philadelphia and London: W. B. Saunders Company, 1922.

The author shows that he appreciates the difficulties of the study. He has carefully digested the literature on the subject and gives it to the students of electrocardiography in an easy, digestible form. In his numerous pictures of electrocardiograms in cases of angina pectoris, it would have been better had he called attention to the peculiar characteristics, if any were present, in each of the electrocardiograms which he shows. H. S.

An Essay on the Physiology of Mind. An interpretation based on biological, morphological, physical and chemical considerations. By Francis X. Dercum. Philadelphia and London: W. B. Saunders Company, 1922.

This 150-page essay of Dercum's is a protest against the attitude of those metaphysicians and psychologists by whom "the phenomena of mind have been approached as though they were peculiar in their character and being; as though a difference, essential and intrinsic, separated these phenomena by a wide and hopeless gap from all other phenomena of nature." In the first part of the book, one begins with the unicellular organism without nervous system, proceeds by way of the sponges through the fishes and the higher vertebrates to the fully developed human. No especial difficulty is encountered until one meets the word "consciousness" on page 82. The rest of the book is devoted to bridging the gap. The final chapter endeavors to explain the psychoses and the psycho-neuroses in terms of physiology. It is good reading for those who have read much or who will read much. Others may as well let it alone. E. W. T.

BUSINESS AND THE BUSY PHYSICIAN

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Drugs and Chemicals—The teachings of the physiological action of drugs and chemicals are based primarily upon the quality of the chemical. A certain element of success in the treatment of diseases, therefore, depends upon the quality of the prescribed agents. In many instances not enough attention is given to this important feature of medicine. Physicians have come to rely for accuracy in the manufacture of chemicals upon the integrity of the manufacturer and also upon the reports of the Council on Pharmacy and Chemistry of the A. M. A.

It is not the policy of the Journal to commend one good manufacturer above another, but we will not knowingly carry the advertisement of any manufacturer or distributing agent who has not the endorsement of the laboratories of our own national association. The advertising columns of this issue of the Journal carry manufacturers' announcements of a number of chemicals and drugs. These have all been accepted by the Council on Pharmacy and Chemistry. In this list may be mentioned the medicated alcohol of the Mifflin Chemical Corporation for external use; "Cinchophen" of the Abbot Laboratories; anti-toxins, serums and vaccines of Parke, Davis & Co.; the Cutter Laboratories; Eli Lilly & Co.

More general manufacturers and distributors of standard drugs and chemicals who hold accredited standing on the advertising pages of this Journal are: Lederle Anti-toxin Laboratories; Powers-Weightman-Rosengarten Company; The Wander Company; The Wilson Laboratories; E. R. Squibb & Sons.; Hynson, Westcott & Dunning; Schering & Glatz; Arlington Chemical Company; Maltbie Chemical Company; Laboratories of G. H. Sherman, M. D.

The drugs and chemicals of these manufacturers may be commended so long as their advertisements are accepted by this Journal.

More About Investments—The attention of all of our readers is called to the advertisement of E. H. Rollins & Sons in the advertising columns of this issue of the Journal. This is one of the oldest and most reliable of the security and investment houses of this country. In addition to careful scrutiny of securities, the representatives of this house offer personal service to physicians in selecting securities and investments.

It is pleasing to note that physicians are utilizing more and more legitimate channels of investment for their earnings than we did as a class in former years. Financial agents assure us that it is constantly growing more difficult to sell physicians the proverbial "wildcat" stocks and investments, although as a class we are still toward the top of the list of gullibles.

Physicians interested in investments and securities will make no mistake in consulting E. H. Rollins & Sons before they act—not afterwards, as we often do.

We believe that every physician who holds a government, state or county position should be a member of the State medical organization, and the failure of any acceptable physician to be a member is certainly a sign that he is not awake to his own best interests. Organized medicine stands for the advancement and protection of its members and the protection of the public against incompetent and unscrupulous practitioners; so if you are competent and ethical you should get aboard, and when you get aboard don't rock the boat.—Nevada Medical Bulletin, August 15, 1922.

EXTENSION WORK

The following additions have been made to the Extension Lecture courses offered by members of the State Society to local societies. (See November, February, March, June, and July Journals for other lectures.)

G. Carl H. McPheeters,
1021 Mattie Bldg., Fresno.

I—Obstetrics vs. Midwifery.
1. A brief historic account of the oldest branch of medicine.
2. The evils of the midwife system briefly set forth.
3. The beginning and rise of the present-day obstetrics.
   (a) Instruments in Obstetrics.
   (b) Anasthesia in Obstetrics.
   (c) Surgery in Obstetrics.
   (d) Prenatal care in Obstetrics.
   (e) Postpartum care and follow-up.
4. Development of Obstetrics.
5. Present status of Obstetrics as a branch of medicine. Most often combined with Gynecology, sometimes with Pediatrics and occasionally practiced by itself alone.
6. The great need of better Obstetrics as shown by maternal and infantile mortality and morbidity in the United States.
7. Rewards of better Obstetrics to patients and physicians set forth.

II—Prenatal Care in Obstetrics.
1. Great value of examination of both parties prior to marriage, a matter physicians should emphasize.
2. Each married woman should have a complete physical examination before each pregnancy begins and especially before her first pregnancy. Physicians must teach laity the importance of this.
3. Physical examinations before pregnancy will disclose anemia, focal infections, pelvic deformities, and gross diseases incompatible with normal pregnancies, such as tuberculosis, syphilis, diabetes, nephritis, heart disease with hyperthyroidism, whenever present. Many married women become pregnant with diseases present, of which they are not aware.
4. Examination early in pregnancy. Anemia and focal infections are exhibited by most women who present themselves for examination.
5. Written instructions given patient at her first visit. Treatments for anemia and other troubles begin at once. Care of abdomen and breasts advised. Urine examinations, visits to doctor, diet instructions, when needed.

III—Care of the Abdomen and Breasts in Pregnancy. (Illustrated with lantern slides.)
1. Striae—formation of skin.
2. Diastasis and distension of abdominal muscles.
3. Visceroptosis, which often includes ptosis of bladder and rectum.
4. Lordosis with posture disturbances; the "pot-belly" exaggerated by use of high-heel shoes.
5. Evils of modern dress brassier, worn by most women—pendulous, flat breasts and depressed nipples. Such breasts are worse after pregnancy and lactation.
6. Means of preserving figure-profile in pregnancy and lactation.
   (a) Massaging abdomen during the whole of pregnancy. Author's method described and illustrated.
   (b) Supporters for pregnant abdomen. The great mistake of going without any support. Supporters during pregnancy prevent distension of abdominal muscles with weakening of voluntary powers, and later visceroptosis because of weakened muscles.
   (c) Restoration of flat, pendulous breasts preparatory to function. Author's methods described. Maternity brassiers described and illustrated. Value of proper massage preparatory to function. Assistance of the endocrines where such assistance is clearly needed.

IV—The Toxemias of Pregnancy and their Treatments.
1. Facts causing toxemias in pregnancy.
   (a) Organic diseases, such as nephritis, tuberculosis, diabetes, syphilis, hyper-thyroid disease, active heart disease and pyelitis.
   (b) Minor foci of infection, such as pyorrhea alveolaris, nasal catarrh, nasal sinus infection, infected tonsils, lymph adenitis, cervicitis and hemorrhoidal infection.
   (c) Conditions secondary to disease: anemia, constipation, hyperacidity, headache, excessive nervousness and endocrine disturbances.
   (d) Types of toxemia described.
      1. Mild types and prognosis.
      2. Severe type and prognosis.
2. Treatments.
   (a) Treatments of mild type in detail.
   (b) Treatments of severe type in detail.
3. Prophylaxis of toxemia of pregnancy.
   (a) Pre-nuptial physical examination (every girl and young woman intending marriage should be examined).
   (b) By physical examination before pregnancy is undertaken.
   (c) By pre-natal physical examination and observation of the expectant mother.
   (d) By immediate correction of anemia, eradication of focal infections, and correction of constipation, hyperacidity and the early nausea and vomiting of pregnancy.
   (e) By immediate attention to every patient whose examination shows she is an apt subject to toxemia because of poor physical condition, or evident endocrine imbalance.
   (f) By immediate treatments for mild toxemia as a preventive of more severe toxemia.

OBITUARY

ALEXANDER RICHTER CRAIG

Dr. Alexander Richter Craig, secretary of the American Medical Association, died August 25, 1922, while on his vacation. Dr. Craig had not been well for some time, but that he was seriously ill had not occurred to him nor to his friends.

The American Medical Association, as well as its constituent State and county branches, all suffer a keen loss in the passing of Dr. Craig. His usefulness to medicine and public health and to the A. M. A. as an organization cannot be fully appreciated by those who were not in intimate contact with him in the central office.

The Medical Society of the State of California extends to Dr. Craig's bereaved family and his friends our sympathies in the hour of their bereavement.

DEATHS

McGarry, John A. Died in San Francisco, July 1, 1922, aged 47 years. Graduate L. A. Dept., University of California, 1898. Member of Los Angeles County Medical Society.

Palmer, Wilton H. Died in Los Angeles, August 24, 1922, aged 72 years. Graduate of Homeo. Hosp. Coll., Ohio, 1879.

Cooke, William Henry. Died at Redondo Beach, Calif., July 28, 1922. Graduate of Queens Univ., Ontario, Canada, 1888.

Reynolds, George P. Died at San Francisco, Calif., August 4, 1922, aged 75 years. Graduate of Medical Dept., Syracuse Univ., N. Y., 1873. He was a member of Alameda County Medical Society.

Wilson, Lafayette J. Died at San Francisco, August 15, 1922, aged 38. Graduate of Hahnemann Med. Coll. of Pacific, 1915. Member of Sonoma County Medical Society.

Nash, Francis O. Died at Hollister, Calif., August 19, 1922, aged 80 years. Dr. Nash was a graduate of Bowdoin Med. School, Maine, 1868. He was a veteran of the Civil War and had been a resident of Hollister for over 50 years. Was a member of the San Benito County Medical Society.

Bond, Frederick Taylor. Died at Vallejo, Calif., August 23, 1922, aged 58. Graduate of the Medical Dept., Univ. of California, 1890. Member of Solano County Medical Society.

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ORIGINAL ARTICLES

RESPONSIBILITY FOR STATEMENTS AND CONCLUSIONS IN ORIGINAL ARTICLES

The author of an article appearing in the JOURNAL *is entirely responsible for all statements and conclusions. These may or may not be in harmony with the views of the editorial staff. Furthermore, authors are largely responsible for the language and method of presenting their subjects. All manuscripts will be carefully read, but editorial privileges will be exercised only to a very limited extent. It is believed that the manner of presentation of any subject by any author determines to no small degree the value of his conclusions. Therefore, both the author and the reader, in our opinion, are entitled to have the subject as presented by the author as little disturbed as possible by the editors. However, the right to reduce or reject any article is always reserved.*

FREUD AND THE FREUDIANS.*

By EVA CHARLOTTE REID, M. D.

There is no physician living today whose name is more widely known and frequently used by both the medical profession and the laity than that of Professor Sigmund Freud of Vienna. The various derivatives of his name, freudian, freudianism and the freudians are now used as common nouns and adjectives, and written without a capital letter, in the same manner as we speak of a ford car, an edison phonograph or a bell telephone.

Probably no theories ever propounded produced more warm adherents and more bitter antagonists than those of Freud. When such is the case one is led to suspect that the theories are a composite of truth and error and that the adherents see only the former and the opponents the latter. It has therefore been the duty of those who were more or less neutral on the subject to smelt out in the crucible of experience the truth from the error.

Hysteria as a definite entity was first described by Charcot in 1884. He demonstrated that traumatic neuroses could be produced by purely psychic causes, and produced paralysis by hypnosis and even suggestion. In his treatment he adhered strictly to mechanical and chemical therapy. Pierre Janet went a step further and cured a case of traumatic hysteria by hypnotizing the patient, taking her back to the time when the shock occurred and suggesting that it was harmless. Gower and Mitchell in England and Prince, James, White and Sidis in America produced similar results under hypnosis.

It remained for Freud to discover that the neuroses produced by psychic trauma could be cured by psycho-analysis and psychotherapy without hypnosis. In 1893 Freud and Bruer wrote an epoch-making article entitled "Psychic Mechanisms of Hysterical Phenomena" and in 1895 they gave to the world "Studies in Hysteria" which contained the fundamental ideas which led to psycho-analysis, and in 1901 "The Psychopathology of Everyday Life." These writings have revolutionized psychiatry and psychology, and bid fair to revolutionize medicine.

Little attention was paid to the writings of Freud until 1911, when a neurologist of Vienna gave a public lecture in which he condemned Freud and all his works in the most vivid terms. To prove his assertions he read extracts from the writings of Freud. The result was, of course, the opposite from what he had intended, and the audience arose en masse and migrated to the book stores to purchase the books of Freud. For months the printing presses were kept busy supplying the demand.

In America the "old guard" in neuropsychiatry, led by Dercum, Burr, Mills, Dana and others, at first ignored the Freudian movement, but as its adherents, led by White, Jeliffe, Brill and Ernest Jones, grew in numbers and literary productivity the neuropsychiatric world became more or less divided into two camps, freudians and anti-freudians. While the conflict never reached the point of open denunciation and vituperation as it did in Europe, no neuropsychiatric meeting is considered complete without a more or less heated discussion of freudianism. The freudians have insinuated that the resistance of the opposition was based on repressed complexes which might be eliminated by psycho-analysis. The anti-freudians have hinted that anyone who interprets the dreams and subconscious reactions of his patients after the manner of the freudians must himself be abnormal. Morton Prince believes they are both psychological problems as much as a case of psychoneurosis. More and more neuropsychiatrists are taking a middle ground, and are making use of the great therapeutic agent of psycho-analysis while discarding the erroneous doctrines of Freud.

To give a brief resumé of the theories of Freud is not easy. It is characteristic of Freud and the

*Read before the San Francisco County Medical Society, September 5, 1922.

freudians that nowhere do they give a clear, concise, scientific description of their methods. The fundamentals of the theory of freudian psychoanalysis might be summarized as follows:

First—The instinct of reproduction is paramount in the individual.

Second—In the infant there are certain erogenic zones scattered throughout the body, principally around the orifices. The sensations arising from these zones are sexual in nature and are present from earliest infancy. The sensations from these scattered erogenic zones are in the normal, concentrated in the reproductive organs by a process of evolution. Evolution may fail to progress normally, these zones may fail to concentrate and the individual thus retains the desire for infantile methods of satisfaction. When these desires are consciously indulged, sex perversion is the result. When they are subconscious and repressed they come forth as a neurosis which is a symbolic attempt at wish fulfillment. In other words, sex perversion represents the positive and psychoneuroses, the negative phase of the miscarriage of the sex instinct.

Third—That hysterical symptoms express symbolically ideas which lie below the level of consciousness and are always of the nature of unfulfilled unrecognized wishes.

Fourth—The repressed idea is always of a sexual nature and is usually founded in incestuous desires.

Fifth—The wish was once conscious, but on account of its painful character, has been repressed.

Sixth—That repressions are due to the ban which religion and social conventions have set upon the manifestations of the elemental instincts. In the conflict between the inherent sex instinct and artificial culture the neurosis serves as a compromise.

Freud at first used hypnosis but found that he could investigate the subconscious by means of free association and dream analysis. Later he added word association. Free association he practiced by allowing the patient to reproduce his life history. All gaps, evasions, subterfuges and contradictions were followed up by questioning. In elaborating his theories Freud coined a number of new terms which have since become popular. A *complex* is a combination of ideas of high emotional value which exists in the subconscious mind and which demands a certain outlet which produces satisfaction. If the satisfaction demanded is contrary to the ethical and moral standards of the conscious mind there results a *mental conflict*. If the conscious mind is the victor in the conflict the complex is *repressed*. The force which prevents the repressed complex from coming to the surface Freud calls the *censor*.

Dreams, according to Freud, always express a wish fulfillment. This wish is always subconscious and always of a sexual nature. These wishes, which are too repulsive to appear in their native hideousness, have to be camouflaged as symbolic representations, the censor being less active in the sleeping than the waking state allows them to appear in this form. The symbolization must be interpreted by the analyst. "Dreams are composed of threads which extend away back into the subconscious mind and each thread must be followed separately."

Word association is practiced by the selection of one hundred words. These words are given to the patient and he is told to respond with the first word that comes to his mind. A stopwatch is used to ascertain the average reaction time of the patient. A word that produces a long time reaction is noted as a *complex indicator*. The list of words is repeated and a word that produces a different response the second time is also a complex indicator. These words are then followed up one by one by free association.

When the repressed complex has been discovered there must be a *transference* of the repressed wish from the original object to the person of the analyst. It is then the duty of the analyst to effect a *sublimation* of the libido or sex instinct to useful and ethical activities.

The theory that the instinct of reproduction is paramount in the individual and that the sex instinct supplies the only dynamic force in the production of the psychoneuroses has long since been abandoned by the majority of psychiatrists. The war proved what many of us had already known, namely, that the old adage "self-preservation is the first law of nature" still holds good. In the majority of cases of psychoneuroses occurring in the army, the element of sex was entirely lacking. My personal experience which covers fifteen years and has been confined chiefly to the middle and lower classes of society, has proven to me that the causes of psychoneuroses are as varied as the patients themselves are varied, and anyone who approaches the problem with the preconceived idea that all the psychoneuroses found in sex or any one other cause will fail to interpret the symptoms of his patients correctly. I should say that less than half of the cases I have examined have anything to do with sex. First among the causes I would place maladjustment of the individual to his environment. Myerson has aptly said: "Psychoneurotics are individuals not willing to accept the odious conditions in which they find themselves and yet not strong enough to change them." In these cases the inferiority complex frequently plays a part. In the struggle to handle a job that is too big for the individual the psychoneurosis proves a graceful and apparently legitimate way out. In the case of the married woman of moderate means the fear of pregnancy usually hangs over her like the sword of Damocles. This fear not only includes the discomfort of pregnancy, the danger, suffering and expense of childbirth, but bringing into the world a child whom she cannot properly feed, clothe and educate. This conflict is especially acute in women of the Catholic faith, the tenents of which forbid all forms of birth control. The psychoneurosis provides an escape from the net in which she is entangled. If she is persistent in her indisposition and also persistent in her attendance at the

office of the surgeon, her complex may disappear via the surgical route.

The theory of infantile sexualism is ingenius but absurd. To claim that the satisfaction of securing nourishment is secondary in the infant to sex satisfaction in nursing is ridiculous. In the theory of sex perversion Freud overlooks the ductless glands, and the fact that the pervert is usually, perhaps always, one of nature's mistakes in endocrinology.

The theory that the conflict which produces a psychoneurosis is always unconscious is likewise untrue. The mechanism of the psychoneurosis is unconscious, but the conflict itself is more or less conscious. In many cases it is vaguely realized, but the patient usually because of an inherent cowardice has never analyzed his difficulty and faced the situation frankly, although conscious of its existence.

The theory that all dreams found in unfulfilled sex desires is also untrue. Nothing could be more absurd and far fetched than the dream analysis of the freudians. It is safe to say no two of them would analyze a dream exactly the same. Dreams, especially in primitive minds, are usually simple wish fulfillments and found in self rather than race preservation.

The theory that the analysis of a conflict requires weeks and months and years is a pernicious doctrine. Brill states it takes two weeks to get acquainted with the patient, and that the analysis may require two years. No good can come from keeping the mind of a patient fixed upon himself and his sex instinct for two years. Sadler says, "Man can exist at the poles or the equator, he can eat almost anything or everything but he cannot long stand self-contemplation." Prolonged analysis induces morbid introspection and retrospection. The freudian presupposes in the mind of his patient some secret perversion or sex abnormality which in the majority of cases does not exist, and all sorts of pernicious suggestion has been put into the minds of the young by the probing of these so-called psycho-analysts.

The theory of transference is fraught with much danger, especially if the analyst and the patient be of the opposite sex. Freud states that "analysis without transference leads to introversion, and transference without analysis to slavish subliminaation and mental bondage." He also states that it might be claimed that there are three ways of handling a transference, first, by a legitimate union between the patient and the analyst; second, by breaking off all relations and bringing the analysis to a close; and third, by an illegitimate temporary love relation.

He disavows the use of any of these methods. Brill admits that there may be a "moral danger to the practitioner of the art" (he does not mention the danger to the patient), and Pfeister states, "A strong reserve is necessary on the part of the analyst, otherwise the patient will cling to him." The fact that these writers admit the danger shows it is a real one, and one is led to wonder if all those who "practice the art" have the "strong reserve" of which Pfeister speaks. The whole theory of Freudian analysis depends too much upon the personality and imagination of the analyst and his ability to interpret symptoms correctly. The analyst who starts with the premises that all mental conflict found in sex will read into the mind of his patient the ideas that dominate his own. In this way it is open to artifacts of the most insidious kind.

One of the evils freudianism has brought in its train is the lay psycho-analyst. A book of five hundred pages has been written by Pfeister to teach clergymen and teachers the art of freudian psycho-analysis. He states that only those should practice the art who themselves have undergone a "psycho-analytical purification," and we have seen the spectacle of laymen who have no other qualification except the fact that they have undergone a "psycho-analytical purification" for a psycho-neurosis and who have had no fundamental training in either psychology or medicine, setting themselves up as professional psycho-analysts. Incalculable harm has been done by these lay psycho-analysts who are incapable of differentiating between an organic condition, a psychosis and a psychoneurosis. This is especially true in depression of the maniac-depressive type, notably involutional melancholia where the patient is given to morbid introspection and self-accusation.

Probably the worst inditement of freudianism is the influence it has had on the moral tone of the world at large. Its adherents have flooded the market with a literature which for pure obsenity and subtle and pernicious suggestion probably surpasses anything ever written. If the productions of Ernest Jones, Brill, Roby and others had not been written under the guise of science they would have been forbidden the use of the mails. These books have found their way into every university and public library and are being devoured by students and the laity. As a result, the moral tone of the community is lowered. As one writer says, "It has furnished a pseudo-scientific justification for allying ourselves with the brutes." What was considered virtues by our fathers are now considered repressions and inhibitions by the younger generation. They forget that it was by these virtues, or inhibitions of the elemental instincts that the human race has raised itself above the level of the animal to its present cultural and mental status. Religion which has been the most powerful factor in elevating the human race is regarded by the freudians as being founded on symbolism which has its roots in sex, and all the higher moral, social and ethical activities as manifestations of the sex instinct which have been sublimated.

Having considered the errors and resulting evils of the doctrines of freudianism, we will now consider the benefits derived from the truths contained in these doctrines. Freud has been to psychology and psychiatry what Darwin was to physiology and biology. He showed that the unconscious mind bears the imprint of hundreds of thousands of years of evolution. He preached the doctrine

of psychic determinism and showed that nothing happens by chance. He demonstrated the tremendous importance of childhood impressions and environment, and the danger of carrying over into adult life childish reactions and dependencies. He showed how to analyze the happenings of everyday life and called attention to the significance of forgetting of words and names, substitutions and evasions. Truths that were vaguely recognized for centuries were crystallized and given a name by Freud. Take, for instance, the word overcompensation. This reaction was recognized by Bulwar-Lytton in his Richelieu, when the old cardinal says, "the man bows too low," and Shakespeare when he says, "he doth protest too much." Freud showed the significance of this reaction and how to use it in analyzing patients. The patient who volunteers the information that he loves his wife devotedly gives the examiner a clue upon which to work. The theories of Freud have thrown a flood of light not only on the etiology of mental disorders, but upon the causes of domestic infelicity, social unrest, vagrancy, prostitution and crime.

The observations which led Freud to the conclusion that all repressions were of a sexual nature were the logical reactions in his patients to the viewpoint of the Victorian age, when the mention of anything pertaining to sex was considered vulgar and obscene. In the school books on physiology the pelvis is omitted and no mention is made of the process of reproduction. Naturally in the minds of the young there resulted ignorance, misunderstanding and superstition which brought about isolation, a feeling of shame, guilt and remorse. Freudianism, which has carried the present generation to the opposite extreme, may show the world the need of safe, sane and scientific sex instruction of the young.

Before the advent of freudianism the psychologist immured in his library and his laboratory was interested only in academic discussions of the component parts of the mind and their relation to each other, threshold sensations and time reactions. He had no interest in the man on the street, or the girl in the factory, or why Murphy got drunk and beat his wife or why the Jones boy left home. All that is changing and through the influence of Freudianism, psychology is becoming humanized and helpful.

The greatest service rendered by Freud is to the medical profession itself. His doctrines were given to the world at a time when the practice of medicine was rapidly becoming a matter of diagnosis and treatment by means of a huge, unwieldy, complicated machine. In the multiplicity of clinical and laboratory tests and surgical procedures the physician had forgotten the patient himself. If after every test had been applied, every organ investigated, those that were misplaced were tied down or tacked up or removed, the patient still complained, he was given a placebo or told he was suffering from imagination and advised to go home and forget about his pain. These patients furnished the wonder cures for the fifty-seven different varieties of mental healers and bloodless and drugless practitioners that sprang into being. The medical profession had not kept up with the trend of the times and failed to recognize the power of the mind over the body. The wonder is that through all the ages of faith cures and so-called miracles the medical profession had failed to grasp the great truth which Freud discovered. These cults and practitioners came into being in direct response to a call for help from a suffering people. The Church honestly and the charlatan dishonestly attempted to fill the need that the medical profession had ignored. The multiplicity and activities of these cults are now causing the profession some anxiety. The cure for the condition lies not in ridicule nor in litigation nor legislation. It lies in teaching the physician to deal with his patients more skilfully than the charlatan or the mental healer. The average physician is ten times better equipped in education and experience to deal with the mental problems of his patient than the charlatan or the mental healer, if he would only take the time and trouble to do so. The physician who has not learned to observe and note the mental reactions of his patients is liable to very serious error. I have said that no one should treat the abnormal mind without a knowledge of the entire body. I would now reverse this and say that no one should treat the body without some knowledge of the mind. It does not, as the freudians would have us believe, require weeks and months to acquire a sympathetic insight into the problems of the average patient. In the majority of cases the trouble is easily discovered. Those who require more time and greater skill than the general practitioner can furnish should be referred to a neuropsychiatrist and not allowed to drift to the charlatan and the mental healer. The truth contained in the doctrines of Freud, if properly applied, will solve the problem of the charlatan. The error of his doctrines will be eliminated by time and experience.

Fellowship Offered by Johnston-Wickett Clinic—The Johnston-Wickett Clinic of Anaheim are offering to young physicians who have graduated from acceptable schools of medicine and have just completed their intern year, fellowships in the Johnston-Wickett Clinic for one year at $100 per month. The year will be from July 1 to June 30, but they are willing to accept two for the remainder of the present year.

The staff of the Johnston-Wickett Clinic believe that their group is prepared to give young physicians an opportunity to develop their contact in a manner similar to that they would encounter in their own offices. They believe that a year may be spent in one or more of their departments to the advantage of the young physician, and they agree to assist in every way possible at the end of the year's service in helping the man who has completed his work in finding a suitable location. The clinic and staff announce that they will work in full co-operation with the medical colleges and the organizations of medical men in carrying this movement forward.

THE DIAGNOSTIC AND PROGNOSTIC VALUE OF BREATH-HOLDING TEST*

By F. H. McMECHAN, M. D., Avon Lake, Ohio

How long can you hold your breath?

This seems an almost absurd question, and yet cumulative experience is showing that the breath-holding capacity and the apneic pause can be made of the most practical diagnostic and prognostic value in the routine practice of medicine. In simplicity, scope and utility, respiratory tests may be classified with the taking of the temperature, pulse, and respiratory rates.

It is nearly two centuries since Valsalva's classical experiment, in 1740, showed the marked and easily recognizable effect of sustained *forced expiration* on the pulse beat, and therefore on cardiac efficiency, when the respiratory passages are forcibly closed. A hundred years later, in 1838, Johannes Mueller of Berlin added the complementary experiment of the effects on the pulse of *forced inspiration* under similar conditions. These two experiments early indicated the intimate relationship of the cardio-respiratory mechanism in health and disease.

In 1902, Sabrazes, of Bordeaux, collected the literature on the voluntary apneic pause, and in an investigation of his own, by means of a split-second watch, he found the average *normal voluntary apneic interval* (between breaths) to be from 20 to 25 seconds in duration; while an interval of 30 to 35 seconds was exceptional. His further observations showed that the voluntary apneic pause varied in different pathological states, and in *mitral insufficiency with asystole,* it was not in excess of from 5 to 10 seconds.

In making his test, Sabrazes used no preliminary forced inspiration, for apnea, under such circumstances, has it own laws. In mitral insufficiency, after compensation had been re-established by digitalis, Sabrazes found the apneic interval prolonged to from 10 to 15 seconds. Sabrazes also reported that the blood pressure rose during the apneic pause, and that the sign of Muset—oscillation of the head—appeared more noticeable during the pause. Of all pathological conditions studied, tuberculosis showed the least response to the test, as even in advanced cases of pulmonary tuberculosis the apneic interval was not so noticeably shortened. In the study of miscellaneous individuals, Sabrazes found that *deep inspiration* or *involuntary expiration,* might lengthen the pause to from 40 to 50 seconds.

More recently, Binet and Bourgeois of Paris have fixed the average normal interval after deep inspiration at 50 seconds. In the French Aviation Service tests, candidates whose pause was under 45 seconds were deemed unsuited for respiration at high altitudes. Unfortunately, Binet and Bourgeois do not allude to the relation of voluntary apnea to disease, tolerance of anesthesia, or to the prolonged interval in special individuals, such as divers.

In 1914, Stange, of Petrograd, recommended the so-called *respiratory test* as the best indication of the patient's cardiac condition for withstanding operation under general anesthesia. Stange found that average healthy persons could hold the breath for from 45 to 50 seconds, while patients with weak heart muscles could do so but for from 10 to 20 seconds. While Stange seemed to have had no suspicion that the breath-holding test was based on an apnea due to *decreased alkaline reserve,* nevertheless he reported observations on a number of chronic diseases, in which he found the duration of the apneic pause shortened in about the degree in which so-called *acidosis* is known to occur from the results of other observers; notably, Yandell Henderson, especially in his studies of altitude sickness.

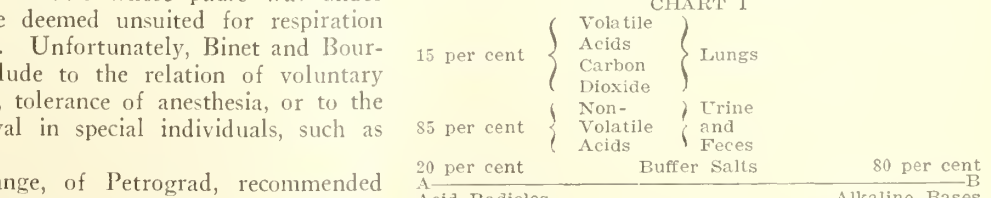
Lewis, Ryffel, Wolf, Cotton, and Barcroft have also shown that the dyspnea of nephritis is due to an acidosis (hypo-alkalinity) essentially like that developed in normal people at high altitudes. Kenway, Pembrey, and Poulton have also found that by following the alveolar carbon dioxide content in diabetics, a warning drop in its tension indicates the approach of coma as long as forty-eight hours beforehand, and much sooner than any other available test.

A thorough understanding and proper evaluation of the breath-holding test, as a diagnostic and prognostic indication in abnormal conditions, depends on the realization that the breath-holding capacity and apneic pause involve the oxygen absorption and carbon dioxide elimination phases of pulmonary respiration as well as the balance of blood and tissue reserve alkalinity. This should be emphasized, especially since Yandell Henderson has shown that three-fourths of the actual breathing of the body is tissue, and only one-fourth pulmonary respiration.

Respiratory alterations, due primarily to disturbances of oxygen absorption, should be classified under the term anoxemia; while those dependent on carbon dioxide elimination should be considered under acidemia; while certain conditions affecting both phases of the respiratory cycle as well as blood and tissue alkaline reserve, should be considered under acapnia. The breath-holding test is all the more valuable, however, because it represents in its ultimate analysis the response of the body to the oxygen-carbon dioxide balance in the alveolar air, blood, and tissues under any and all conditions of health and disease.

Mercur, of Pittsburgh, has recently presented a diagrammatic concept of hypo-alkalinity in relation to disease and the breath-holding test that is very illuminating. He uses the accompanying diagram (Chart I), suggested by blood chemistry studies, to illustrate his therapeutic concept:

CHART I



Imagine all the blood of the body to be represented by the straight line A-B. The blood is a

* Read before the General Sessions of the State Meeting at Yosemite, May 16, 1922.

fluid approximately of 80 per cent alkaline bases and 20 per cent acid radicles—a proportion held in remarkable balance, according to Rowntree, by the *buffer salts* of the blood. In *health* the buffer, irrespective of metabolic indiscretions, promptly takes up an excess on either side, and the delicate balance is not materially changed. When *disease conditions* affect the buffer mechanism, there is an acidosis on the one hand, or an alkalosis on the other—either of which may precipitate serious conditions, especially if either is prolonged or severe.

The 20 per cent of acid radicles represent 15 per cent of volatile acids, thrown off principally through the lungs as carbon dioxide and 85 per cent of non-volatile acids, excreted principally through the urine and very slightly through the feces.

According to Mercur, this diagrammatic concept makes it quite evident that if the non-volatile acids, as a result of *deficient elimination,* accumulate in the blood, the volatile acids will be thereby compressed by the lungs and will have to be increased, and thus the breath-holding capacity will be more or less decreased. This is the rational explanation of the clinical value of the breath-holding test.

It also explains why the breath-holding test may be utilized to *anticipate* the diagnostic and prognostic indications of blood and urine analyses, when retention products are being thrown into the blood stream.

Means further illustrates the acid-base equilibrium in disease by the accompanying formula and diagram, originally suggested by L. J. Henderson, H. W. Haggard, and Yandell Henderson.

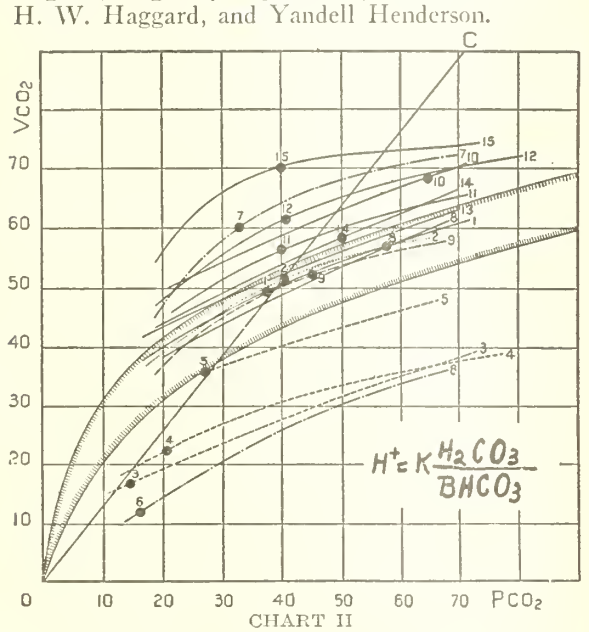


CHART II

The formula is based on the principle that the reaction of the blood is dependent chiefly on the ratio of free carbonic acid to bicarbonate. H^+ is the concentration of ionized hydrogen, H_2CO_3 the concentration of the free carbonic acid, and the $BHCO_3$ the concentration of bicarbonate, and K a constant. The fraction $H_2CO_3/BHCO_3$ ordinarily has a value of approximately 1/20.

Changes in this ratio denote changes in H^+, that is in the blood reaction, while changes in the actual magnitude of the denominator denote changes in available alkali of the blood, and in the numerator changes in the carbon dioxide tension. Knowledge of the two terms of the ratio in any given blood reveal the two most fundamental facts of acidosis.

For clinical purposes Means considers the simplest way of arriving at the value of the ratio, and the two terms of the fraction is to secure data for plotting the so-called carbon dioxide dissociation curve by the method of Christansen, Douglas, and Haldane. Means has found the carbon dioxide dissociation curves of normal human blood to be within the shaded area. When both are normal they cross the line O-C at the points A^1 and A^2, respectively. Any marked change from health to disease would be indicated by a deviation to the alkaline or acid side of the line O-C, or as a response to therapy, and both would be accompanied by diagnostic and prognostic alterations in the breath-holding test, as governed by the oxygen-carbon dioxide reaction of the respiratory mechanism.

The numbered curves in Means' diagram represent plotted carbon dioxide dissociation curves from blood analyses of actual patients, normal (1, 2) or suffering from diabetic acidosis (3, 4, 5), nephritic acidosis (6, 7), pneumonias (8, 9, 10), cebral hemorrhage (11), anemias (12, 13, 15) and tetany (14). The tendency to acidosis and alkalosis is very apparent.

Yandell Henderson's directions for making the breath-holding test are as follows:

1. Sit quiet for five minutes.
2. Take a full, but not too deep breath.
3. Hold it with mouth and nostrils closed.
4. Note time in seconds.

Diagrammatically, and for all practical purposes, a breath-holding test (Stange) of 50 to 70 seconds is above the average normal, while 45 to 50 seconds represents the test of the average healthy person; 35 to 45 seconds indicates beginning acidemia; 25 to 35 seconds, mild acidosis; 15 to 25 seconds, frank acidosis; and 10 to 15 seconds an imperiling acidosis.

According to the apneic pause, split-seconds watch method of Sabrasez, the following intervals represent the same degrees of normality and depletion of alkaline reserve: 30 to 50 seconds, exceptional; 25 to 30 seconds, average normal; 20 to 25 seconds, beginning acidemia; 15 to 20 seconds, mild acidosis; 10 to 15 seconds, frank acidosis; and 5 to 10 seconds, severe acidosis. The difference in time in the two tests is due to the period of time available for the absorption of the deep breath in the Stange test (Chart III).

Involuntary expiration or inspiration during the making of the test, by either method may lengthen the interval, and must be guarded against. The tests may be made more severe by evaluating the average time of several successive tests.

It is of interest also to note, in passing, that

CHART III

Breath-Holding Stange (Seconds)	Sabrazes (Seconds)	Condition	Vital Capacity	Pulse Rate	Resp Rate	Pulse Press.	Heart Load Per cent	Hemoglobin	Oxygen Need Per cent
45-50	25-30	Normal	3500 cc	72	16	40	50	100	20
35-45	20-25	Acidemia	3000 cc	80-100	24	60		90	30
25-35	15-20	Mild Acidosis	2500 cc	100-120	32	80		80	40
15-25	10-15	Acidosis	2000 cc	120-140	40	100		70	50
10-15	5-10	Severe Acidosis	1500 cc	140-160	48	120	200	60	60

the breath-holding test bears a definite and direct ratio to vital capacity as gauged by the spirometer. Dryer and others, notably Wittich, Peabody, and their co-workers, have noted that, while especial fitness and physical training may *increase* vital capacity by 30 per cent above normal, physical fatigue and weakness *decrease* it by about the same amount; *whereas heart disease and other pathological conditions may show a vital capacity 75 per cent below normal.*

Thus, a normal breath-holding test would predicate a minimum vital capacity of 3500 cc. in the average-sized male, and 3000 cc. in the female; whereas, a breath-holding test of 10 to 15 seconds (Stange) would indicate a vital capacity of 1500 cc. or less. As the diseased condition becomes more severe, the breath-holding capacity becomes shorter and the vital capacity falls; and when the patient improves, both again approach normal. Clinically, vital capacity figures bear an approximate relation of 1 to 100 to the Stange test in the male, and the Sabrasez test in the female.

Patients with cardiac disease can lead a normal life if their vital capacity is above 90 per cent; a vital capacity between 70 and 90 per cent means a restricted life and slight amount of work. Patients whose vital capacity is less than 70 per cent are dyspneic on very moderate exertion, and when the vital capacity falls to 40 per cent, dyspnea is pronounced and decompensation is present, or readily occurs.

At this point it should again be emphasized that all *breathlessness* is not necessarily of cardiac origin. A year ago, while discussing the breath-holding test with the physical director of a well-known athletic club, he informed me that he had a group of some twelve business men in his classes, all over forty-five years of age, who got breathless after brief exercise, but on examination by their doctors had been pronounced cardiacly sound. He was at a loss to account for their dyspnea.

Such patients should be given Cornell's tests for the acidemia of chronic nephritis as a prelude to a more searching examination. Cornell has shown that in ninety-five out of one hundred cases, in which nephritis has been present under three years, there is a non-cardiac form of dyspnea associated with mild exertion. His charting of the average respiratory and pulse rate response to exercise in one hundred cases of early chronic nephritis is of very pertinent interest (Chart IV). The tardiness with which the respirations approach their rest-rate is readily seen to be in decided contrast with the quicker and normal slowing of the heart rate.

Cornell has found that although not more than 20 per cent of patients make a complaint of this dyspnea, since in mild cases it is not troublesome, 95 per cent of early nephritics will admit having it when questioned, and its presence can be proved by testing the response of the cardio-respiratory rate-ratio to exercise.

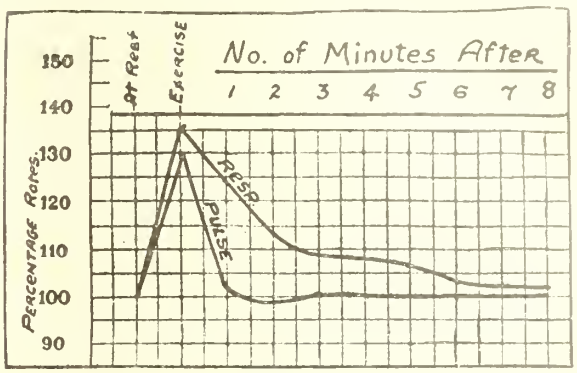


CHART IV

Nephritic dyspnea has two distinguishing characteristics:

1. It has no accompanying cyanosis.
2. It is speedily removed by the oral administration of sodium bicarbonate. Usually, after 4 (20 gr.) doses of bicarbonate, the most extreme type of nephritic dyspnea subsides and disappears.

In fully half the cases studied, Cornell has noted that color changes (red, blue, green or varigated) of the electric bulb are described by the patients during the dyspneic period after exercise, and that alkaline therapy obviates the delusion.

The degree of dyspnea does not always coincide with the *phthalein* output, and seems more dependent on the degree of acidemia and the sensitiveness of the respiratory center. Clinically, this cardio-respiratory test is presumptive evidence of incipient nephritis, even in the absence of albumin, and it also indicates alkaline therapy in nephritics, whose distressing dyspnea fails to respond to digitalis.

Accumulating clinical observations are also showing that the breath-holding test may be charted in relation to pulse rate, pulse pressure, respiratory rate, hemoglobin index, and oxygen need. Some of these relations are briefly shown in Chart V.

CHART V

Case No.	Condition	Breath-holding Test	Pulse Rate	Blood Pressure Sys.	Blood Pressure Dias.	Pulse Pressure	Hemoglobin Index	Oxygen Increase Per cent
1.	Diabetes	16 sec.	108				80	
2.	Thyroid	10 sec.	110	142	95	47	70	50
3.	Thyroid	10 sec.	150	145	67	78	70	100
4.	———	25 sec.	112	123	82	41	70	
5.	Anemia	15 sec.	96	152	74	78	60	
6.	Mitral Regurgitation	40 sec.	92	115	65	50	(Compensating heart)	
7.	Mitral Murmur	14 sec.	110	182	62	120	70	100
8.	Tuberculosis	12 sec.	110	98	78	20	70	
9.	———	15 sec.	100	104	104	40	80	
10.	Pus Diabetes	20 sec.	104	120	62	58	70	
11.	5½ per cent Sugar	35 sec.	(Operation for gangrene)					
12.	Sepsis (Bad teeth; large amounts of pus; giant-cell epulis of lower jaw)	12 sec.	94	148	100	48		
13.	Acute Infective Cellulitis	15 sec.	120 (Temperature 102.4°—For every degree above normal temperature the baso-metabolic rate is increased 10 per cent.)					

At the request of the National Anesthesia Research Society, W. I. Jones, secretary of the Research Committee, subjected the daily run of patients coming to his dental clinic for extractions to the breath-holding test, and ten of the cases charted occurred in the first fifty patients examined, while the other three cases included were operated on at the hospital during the same period.

As patients presenting for extractions are commonly considered to be in average health, an incidence of one seriously handicapped patient in every five in so short a series is certainly provocative of thought.

Note the striking difference in the two diabetic cases (1 and 11): the latter with considerable sugar in the urine, and a breath-holding test of 35 seconds, indicating good renal permeability and fair surgical risk for an amputation; the former showing a breath-holding test of 16 seconds and being a very grave anesthetic risk, although walking into the clinic for a simple extraction.

Note the three thyroid cases (2, 3, and 4), and see how the breath-holding test predicates the other reactions of a more searching examination to determine surgical risk and prognosis. Consider the cardiac cases (5, 6, and 7), and contrast the mitral regurgitation patient, whose booming murmur seemingly could be heard across the room, with the more serious anemic and the very grave mitral risk with a heart load of 200 per cent. The breath-holding test again points the finger of warning. The tubercular cases (8 and 9) were anything but good risks for operation or anesthesia, and yet these patients had little or no appreciation of the gravity of their condition. It is also interesting to note the effects of pus, sepsis, and cellulitis on the breath-holding capacity. These relations, clinically noted by Jones, may be diagrammatically presented as in Chart III.

In the recent influenza epidemics it has often been very difficult to make a certain prognosis in broncho-pneumonias. In this connection Bié, of Copenhagen, studied one thousand cases of influenzal broncho-pneumonia and published his analyses, and more particularly his conclusions regarding the 234 deaths in the series of cases. This large loss of life was due in some degree to the fact that many of the women were pregnant, for the death rate is 2.5 times as great in the gravid. There were also fifty-five patients with heart disease in which the mortality rate was very heavy. A toxic factor, as shown by the presence of jaundice, albuminuria, and the behavior of the temperature, pulse and respiration, means a bad prognosis. Bié found that half of those who breathed thirty-four and upward on admission died, while if the respiratory rate was below thirty-four recovery was the usual outcome. This difference was not dependent on whether the pneumonia was single or double, but inhered in each form, although naturally the prognosis is much better for single pneumonia. In all pneumonias with a respiratory rate above 40 the prognosis is grave, and the more rapid the breathing the worse the outlook.

Hirschfelder, of Minneapolis, has recently stressed the explanation why influenzal pneumonia is so fatal. In influenzal pneumonia the cyanosis is not due to heart failure, but is produced in much the same way as is the cyanosis of congenital heart disease, by the entrance of unaerated blood into the left side of the heart. W. C. Stadie has shown that, whereas in ordinary lobar pneumonia very little blood flows through the consolidated area, owing to increased resistance, and most of the blood flows through the normal parts of the lungs, where it is well oxidized, in influenzal pneumonia there is little resistance to the blood-flow through the congested areas. So the blood flows through without being oxidized and thus enters the left auricle, where it is mixed with aerated blood; and so a mixture of blue and red blood is pumped to the tissues. Thus, such cyanosis is not an expression of heart failure, as it is in the ordinary lobar pneumonia, but an expression of the kind of mixed blood which is coming into the heart from the lungs. It can be readily seen from this explanation why the respiratory rate becomes prognostic.

Very recently Gilbert Fitz-Patrick has reported on the results of the breath-holding test in 871 obstetrical cases, primiparas and multiparas of all ages, and including the various complications found before and subsequent to pregnancy.

1. The average parturient woman has a breath-holding pause of 25 seconds (Sabrazes).

2. The shortest breath-holding test, 3 seconds, was found in a primipara, 44 years of age, weighing 180 pounds, who had a cardio-renal insufficiency, with general venous stasis, and who gave a history of rose fever in her younger life.

3. The longest breath-holding test, 65 seconds, was found in a primipara, 24 years of age, who holds the hurdling championship for girl athletes in her State.

4. The average cardio-nephritic pregnant woman has a breath-holding test of 11 seconds.

5. The toxemias of pregnancy due to faulty excretion showed a test of 18 seconds, while those due to faulty secretion showed a test of 15 seconds. The average vital capacity in 180 obstetrical cases was 135 cubic inches.

Fitz-Patrick concludes (1) that the average pregnant woman has a breath-holding test (Sabrazes) of at least 25 seconds. Any reduction below this point demands an explanation. (2) And that the pregnant woman with an apneic pause of 15 seconds has an organic lesion, is a poor obstetro-surgical risk, and should be given an anesthesia only by a professional anesthetist, nitrous oxid-oxygen being the anesthetic of choice, and the individual oxygen need being determined and supplied.

In conclusion, the breath-holding test in connection with the patient's response to other tests, when indicated, may be of diagnostic and prognostic significance, and may not only indicate therapeutic measures, but may also serve as a guiding sign to their effectiveness. Used routinely at the bedside, in the office, and in the hospital, it can be made one of the most valuable assets of daily practice.

(Stop 63, Lake Shore Road.)

INFECTION OF THE PLACENTA*

By J. MORRIS SLEMONS, M. D., Los Angeles

Since the middle of the nineteenth century, when Semmelweiss, Tarnier, Holmes, Pasteur and Lister laid the foundation for modern aseptic surgical technique, the subject of wound infection and its relation to the mother's convalescence after childbirth have been discussed as thoroughly as their importance justifies. The clinical, pathological and bacteriological evidence which has been accumulated leaves no doubt that favorable conditions for infection prevail during childbirth, that precautions are required to avoid such a complication and that, if these precautions are disregarded, the hazard for the mother becomes very great indeed. It is not desirable to detract from the emphasis already placed upon this danger for the mother, but it should be understood that under given conditions there exists also a serious danger for the infant. Bacterial infection during labor may reach the placenta, pass to the fetus and cause its death either before or after birth. This double hazard, obviously, must strengthen our purpose to observe strictly every precaution against intrapartum infection.

Infection of the contents of the pregnant uterus, as Hellendall has shown by animal experimentation, may occur by three routes, namely, first, by way of the vagina; second, by way of the maternal blood-stream; and third, from the peritoneal cavity by way of the Fallopian tubes as in cases of appendicitis.

Although each of these mechanisms plays a role in human pathology, the first mentioned is encountered by far the most frequently. It is observed usually in cases where labor is prolonged after the rupture of the membranes. In these circumstances the amniotic fluid escapes and the uterus retracts, thus reducing the size of the amniotic cavity. Then it becomes inevitable that the amniotic epithelium should have its basal attachment restricted and its contour distorted. The cells change from a cubical to a cylindrical shape; the nuclei are displaced upward and not infrequently are forced out of the cells which perish immediately and are desquamated for longer or shorter stretches. Injuries of this kind clearly impair the protective action of the epithelium and, if bacteria are present, they may pass through the subamniotic connective tissue, enter the fetal blood-vessels which cross the placenta, and thus reach the umbilical cord.

Now, since the placenta receives simultaneously the blood of the mother as well as the blood of the fetus, once bacteria have gained entrance to the placenta, both mother and fetus are liable to infection. Ordinarily the fetus suffers the more severely, because in the case of transamniotic infections its blood vessels are in the more exposed position and through them the bacteria reach the fetal circulation. The walls of the umbilical vessels are promptly attacked and the infection may extend to the Whartomian jelly. The effect upon the fetus varies—a fact which probably depends upon both the virulence of the bacteria and the period of time elapsing between the infection of the placenta and the birth of the infant.

Frequently, the effects of placental infection upon the mother are limited to the period during labor and amount to no more than a mild degree of fever, rarely exceeding 102 degrees, which subsides the first or second day post-partum. On the other hand, it happens occasionally that the infection spreads beyond the placenta to the uterine wall when typical puerperal infection ensues.

The practical importance of placental infection becomes apparent only when the organ is routinely submitted to thorough examination in the laboratory. Fifty-two instances of infection were encountered in 3000 consecutive placentae derived from cases delivered in the hospital and on this basis may be expected once in sixty deliveries. These statistics, however, include a number of patients sent to the hospital as a last resort after protracted labors and frequently after unsuccessful operative attempts to effect delivery. In private practice, the incidence of placental infection, I am sure, is very much less than in institutions to which patients are sent after they have been in the hands of midwives or have had random medical care.

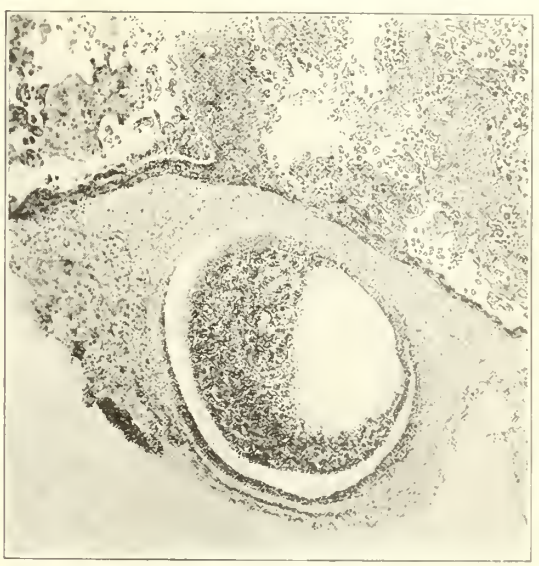


Fig. 1

Thrombosis of blood-vessel on fetal surface of placenta and leucocytic infiltration of subamniotic connective tissue

The ultimate result of placental infection is apt to be much more serious for the infant than for the mother. In my series of fifty-two infected placentae among 3000 cases there were thirty-nine infant deaths, a mortality of 1.3 per cent. Almost surely, however, not all of these deaths may be ascribed to placental infection, for the series included cases of eclampsis, placenta praevia and dystocia, in which operative measures were employed to effect delivery. In such cir-

* Read before the Section on Obstetrics and Gynecology of the California Medical Association at Yosemite National Park, May 16, 1922.

cumstances it is impossible to compute the mortality due to placental infection alone.

Maternal infection was proved during the puerperium in fifteen cases. Fortunately the infection was never a severe one. Generally, the slight degree of fever during labor disappeared after delivery. In two cases, however, fever reappeared on the second and third day post-partum, respectively, and subsequently the course followed was that characteristic of a mild puerperal infection.

The measures required to prevent the infection of the placenta are no other than those most effective for the prevention of puerperal infection. Naturally they include the maintenance of strict aseptic technique during the course of labor —the sterilization of the equipment employed, careful preparation of the patient, conscientious disinfection of the physician's hands and the use of sterilized rubber gloves. It is imperative also to limit the number of vaginal examinations, or better to replace them altogether by rectal ex-

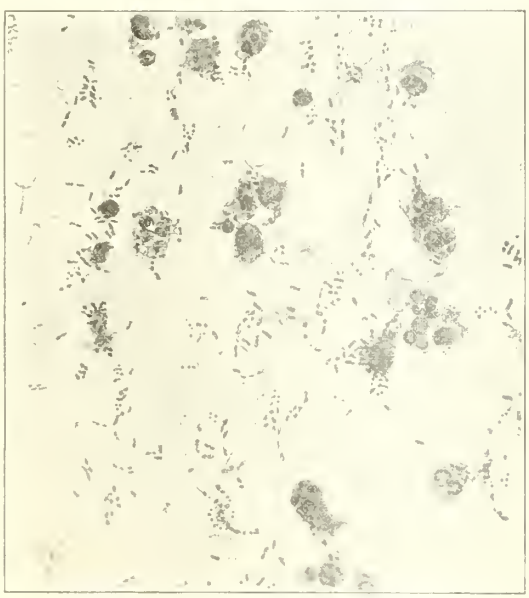


Fig. 2
Bacteria in the subamniotic connective tissue in a case of placental infection

aminations, which after a little practice become thoroughly satisfactory and practically abolish the risk of contaminating the birth canal unless it is necessary to terminate labor by some operative procedure.

DISCUSSION

H. A. Stephenson of San Francisco—I have been very much interested in this paper because Dr. Slemons called attention to this some years ago and since that time we, at the Stanford University Hospital, have paid some attention particularly to this infection of the placenta. In reviewing the cases there, in about 2700 cases I have found about 48 cases of infection. The type of infection is not given inasmuch as we relied entirely on the presence of inflammatory exudates rather than staining these sections for the presence of bacteria. I cannot tell you exactly the number of babies who died in this series of cases, but I think that, off hand, Dr. Slemons' figures would about correspond to ours. I question somewhat, congenially, because Dr. Slemons is a former teacher of mine and I still respect his judgment, the fact that finding cylindrical epithelium over the surface of the placenta is a definite evidence of infection either beginning or more advanced. In the routine study of placentae I am of the opinion that a large percentage of them, even in cases that show infection of the amnion they are infections of the placenta. The fact he has mentioned, of finding cylindrical epithelium in the amnion, I believe that the amniotic may vary normally in shape.

I would also like to emphasize with Dr. Slemons the importance of infection in relation to the baby as well as to the mother and we limit, therefore, vaginal examinations as much as possible. That also applies, I think, to long labors. We try not to have patients stay in labor any longer than absolutely necessary. Even in teaching hospitals we have been very conservative about that. I can recall a good many cases where patients have been in labor thirty to forty hours when perhaps today we might see an indication for terminating the labor more promptly. It is also, I think, important to subject every placenta and cord to miscroscopical examination. That has been done routinely at our hospital for a long time now and not only do we pick up cases of infection unexpectedly but we also pick up other conditions. Some cases in which the mother does not show evidence of syphilis we do find very definite evidence in the placenta, and I think it then advisable to subject both the patient and her husband to an examination of the blood. There are a good many other interesting things which have come up with these examinations of the placenta but I would like to impress this point in addition to looking for evidence of infection.

J. Morris Slemons—I appreciate Dr. Stephenson's remarks and it occurs to me that I did not make myself quite clear. In the first place I did not dwell very much on but merely mentioned the fact that the placenta may become infected in other ways. I did not dwell on these because I did not want to fasten your attention on other things. In a recent case I found that the mother had appendicitis. I operated on the abscess but the product of conception was infected and the fetus died. Evidently that is one way in which infection may occur. Again we all know that the blood stream may infect the placenta. My view with regard to the change in the epithelium is that you can not get an infection through the intact epithelium. The fact that we can get infected placentae in other ways I am more than willing to admit but I do feel very strongly that the damaged epithelium produces a portal of entry. It probably would be interesting to add just a word about the symptoms which the infant presents when it is infected under these circumstances. They are by no means the same. In one case, the child had bleeding from the cord, nose and mouth. In another, there was peritonitis and if we had not examined the placenta as a matter of routine we would have said that the child died from an infected cord, but having shown streptococci in the placenta we know that the cord had nothing to do with it. Again a child died of pleurisy on the tenth day and in this instance bacteria were found in the placenta.

It seems to me that recognition of these cases will go far toward explaining a good many of the infant deaths which heretofore have gone entirely unexplained.

TORULA INFECTION *

REPORT OF TWO CASES

By NEWTON EVANS, M. D., Loma Linda
(From the Laboratory of Pathology, College of Medical Evangelists)

The name "torula" or "pseudo yeast" is applied to a group of organisms resembling but not identical with true yeasts and multiplying only by budding. The first spontaneous infection with torula was noted in a horse in 1902 (Frothingham). The first human infections with this organism, recognized as such, occurred in 1914. These were two cases observed at the Peter Bent Brigham Hospital in Boston and described by Stoddard and Cutler in a monograph published in 1916. They gave the name "torula histolytica" to their micro-organism and discovered in the literature accounts of four additional cases occurring previously, which were manifestly of the same type. Since the publication of Stoddard and Cutler's monograph there has been one additional case reported by Pierson of San Francisco, making a total of seven. I am now reporting two other cases.

There are points of resemblance between the lesions of *torula* disease and those of systemic *blastomycosis* or *oidiomycosis* and *coccidioidal granuloma,* as well as between the organisms themselves. These relationships suggest a consideration of these three types of infection as a group of infectious granulomata, to be compared, and points of difference pointed out.

A large proportion of the cases of *coccidioidal granuloma* have been fatal, as have practically all the cases of systemic *blastomycosis.* All of the *torula* infections so far recognized have terminated fatally. The great majority of the patients dying with systemic *blastomycosis* have been observed in the central portion of the United States, particularly about Chicago. Practically all of the infections with *coccidioides* have occurred in California, the earlier cases coming principally from the San Joaquin Valley, but more recently a large number being observed in Los Angeles and adjacent territory. Of the nine cases of *torula* infection recognized, two occurred in Europe. Three have occurred in California, including the two herewith reported.

With reference to the morphology of the organisms of these three diseases, they are all of very large size as compared with the ordinary bacteria. Of the three the *coccidioides immitis* is the largest, being from 5-85 mikrons in diameter. In the tissues it is spherical and multiplies only by sporulation, large numbers of small organisms escaping from the ruptured capsule of the parent organism. The *blastomyces* is also perfectly spherical in shape and varies from 4-20 mikrons in diameter. In the tissues and lesions in contrast to the *coccidioides,* it multiplies only by budding, like the yeasts. The pathogenic *torula* is somewhat smaller (1-13 mikrons in diameter), is spherical or oval in shape, and in the tissues multiplies only by budding, resembling the *blastomyces* in this respect.

When we come to observe the manner of growth in artificial media of each of these three pathogenic micro-organisms we find some very striking peculiarities. They all grow very readily on the ordinary nutrient media. But in the case of *blastomycetes* and *coccidioides* the form of the growth is entirely different from those in the tissues, appearing now in the form of a luxuriant mass of long branching mycelia, much like ordinary molds. The artificial growth of the *torula,* however, differs from that just described, and consists of forms practically identical with those seen in the tissues, having no resemblance to the molds, and consisting of yeast-like budding organisms.

DISTRIBUTION OF LESIONS

In all the human *torula* infections reported the lesions have had a decidedly characteristic distribution, having been invariably found in the central nervous system and less constantly in lungs, liver, spleen, kidneys and lymph nodes in addition to the brain lesions. No lesions of bones or of the skin have been observed, differing in this respect from the two related diseases.

In all cases the symptoms referable to the central nervous system dominated the clinical picture, indicating organic brain disease. Such clinical diagnoses as tubercular meningitis, senile dementia, general paresis and intracranial pressure symptoms resembling those of brain tumors, were made in these cases.

In all cases the pia-arachnoid was affected by a chronic leptomeningitis, which was associated with more or less extensive inflammatory and caseous lesions of the brain tissue itself. Apparently the infectious process extended from the meninges into the brain tissue by way of the perivascular lymph channels. There is a marked tendency to an involvement of the ventricular lining with a consequent internal hydrocephalus.

Microscopically the lesions are chronically inflammatory with the accumulation and formation of giant cells, large round cells and plasma cells, with intracellularly placed organisms, but practically no polymorphonuclears. There are extensive areas of caseation and the formation of fibrous tissue in the lesions.

The organisms themselves multiply in the tissues, as in artificial culture, only by budding. Several buds may occur simultaneously on one organism and organisms of any size may have buds. In some of the lesions the organisms are of large size, in others they are very small and difficult to recognize by microscopic examination.

One of the most striking characteristics of the lesions is the large amount of mucinous material which most of them contain. This evidently is a product of the growth of the parasite, each organism as it appears microscopically in the tissue being surrounded by a little circular zone of the homegenous, clear and slightly basic-staining mucin. As the organisms invade and grow in the tissue, often intracellularly, the tissue is dissolved and replaced by the organisms and their covering of mucinous material, with a surprising

* Presented to the Section on Pathology and Bacteriology of the State Meeting at Yosemite, May 17, 1922.

lack of any signs of inflammatory reaction. This is notably seen in the tissues of guinea pigs, inoculated experimentally. This destructive action of the parasite upon the tissues is the reason for its name as applied by Stoddard and Cutler, "torula histolytica."

CASE REPORTS

Case 1—Mexican boy, 13 years of age. Entered the medical service of the White Memorial Hospital, Los Angeles, September 15, 1920. Mother states boy's previous health had been good; also that he had been accustomed to take quite regularly and in large quantities a Mexican drink called tesquino, made by fermenting corn with yeast. Patient had mastoidectomy when five years old, and pus was discharged from wound in large amount for one month.

The family history is unimportant. A sister has had a chronic infection of some nature affecting the backs of the hands at times for the past two years.

Present illness began with persistent headache nineteen days before admission to the hospital. During this time he had been brought from Arizona to Los Angeles, and had been seen by a number of physicians. The headache began with pain at the bridge of the nose and later was centered in the frontal region, gradually spreading over the temporal regions. A swelling on the right side of the neck developed, but this did not soften or break down. It was evidently a cervical adenitis. He has slept poorly during the course of the disease.

Physical Examination: Stiffness in the posterior cervical muscles; is unable to flex the head. There is a notable wrinkling of the skin of the forehead; upper extremity reflexes present. Patellar reflex absent; ankle clonus not obtainable. There is a positive Babinski. Kernigs and Brudzinski signs present.

The patient lies in bed moaning with pain. Clouded mentality, eyes closed, presumably from photophobia. Pulse 54, blood pressure 98 and 64.

Repeated spinal punctures were made while in the hospital. Cerebrospinal fluid was under considerable pressure and slightly cloudy. All specimens showed almost complete absence of polymorphonuclears with only a few lymphocytes and occasional endothelial cells. Wasserman negative in cerebrospinal fluid. The Noguchi globulin test was slightly positive.

The most notable findings in the spinal fluid was the presence of numerous yeast-like budding organisms. These organisms were counted as follows: September 15, 320 per cmm; September 16, 480 per cmm; September 21, 840 per cmm; September 22, 1120 per cmm; September 28, 2400 per cmm; October 3, 2200 per cmm.

Nasal smears showed the presence of a few yeastlike organisms similar to those in the spinal fluid.

The only abnormality noted in the urine was a trace of indican.

Blood: Hemoglobin, 50 per cent; red cells, 4,000,000; white cells, 7200; differential count within normal limits.

Course of Disease: The patient rapidly grew weaker and more emaciated. Following each spinal puncture the headache was definitely relieved for about forty-eight hours. Became semicomatose, responding to questions only at times. On October 4, pulmonary edema developed and death occurred on October 5.

Autopsy was refused.

The following notes regarding the organisms appearing in the spinal fluid were made at the time of the examination by H. E. Butha, who made the laboratory examination in this case.

Organisms are present in large numbers in fluid, some round and small, about 5-10 mikrons, others quite large, and round or slightly elliptical, many present showing a bulging point to one side. All have a double refractile contour and show buds of varying sizes, some very small, others being as large as parent cell. Some smaller cells are found budding as well as those of medium and large size. Few prominent granules present in the cell bodies. Budding occasionally is present in two directions, and three or four organisms may be attached together.

Cultures: Organisms grow readily on ordinary media, such as plain agar, blood agar, glucose agar and bullion broth. Colonies appear in from twenty-four to forty-eight hours. No mycelial formation, and no spore production noted. No fermentation occurred in sugar media.

Rabbits were inoculated intraperitoneally and intravenously and killed after four weeks. Multiple lesions containing the parasites were found in various organs and notably in the meninges and brain tissue after intravenous inoculations. Guinea pigs were inoculated intraperitoneally and killed after four weeks. Multiple lesions were produced in various organs, the most characteristic being in the testes. These are gelatinous and translucent and microscopically show immense numbers of the budding organisms surrounded by the gelatinous material with very little delicate fibrous tissue and cells between the organisms, practically no cellular exudate being present. The meningeal and brain lesions are chronic inflammatory in character with many small round cells and numerous immense foreign body giant cells.

It is regretted that it was impossible to secure permission for an autopsy in this case.

Case 2—Hospital Case No. 5965. Patient referred to White Memorial Hospital by Dr. Claude E. Steen. Mexican woman, age 20; married.

Family History: One brother died at 1 year, one sister died at 2 years, one sister living.

Personal History: Whooping cough in early life. Enlarged cervical lymph nodes removed at 14 years of age. Married at 18 years. One pregnancy, terminated at seven months, living child. Again pregnant, six months.

Present Illness: Began having frontal headache and pain in eyes of moderate severity March 19, 1922. On May 1 there was severe frontal headache in right temporal region. May 2, headache worse and violent vomiting. May 3, headache still worse, vomiting and photophobia. May 8, severe headache and photophobia, slightly rigid neck, patellar reflexes diminished. Temperature 99.8. Pulse 100. Extreme constipation. On this day lumbar puncture was made—25 cc. of comparatively clear fluid escaping under increased pressure. Pain in the head was immediately relieved, patient walking from physician's office.

The pain gradually returned, until symptoms on May 11 were the same as preceding the spinal puncture. May 11, temperature 98, pulse 72. At this time the knee jerks were markedly exaggerated. A second spinal puncture with the removal of 35 cc. under increased pressure again gave relief from the symptoms. Blood pressure S110, and D75. May 12, patient felt much better.

Microscopic examination of fluid reveals 35-40 characteristic budding organisms in the cubic millimeter, with increased lymphocytes, but no polymorphonuclears. Cultures on the usual media yield characteristic colonies of the torula organism.

Spinal punctures were made as follows: May 8, 25 cc., clear fluid, 35-40 organisms per cmm. May 11, 35 cc., slightly cloudy fluid, 160 per cmm. May 14, 40 cc., slightly cloudy fluid, 360 per cmm. May 18, 35 cc., slightly cloudy fluid, 1800 per cmm. May 21, 40 cc., fluid not examined.

Blood Count: May 24, red cells, 3,568,000; white cells, 13,200; hemoglobin, 73 per cent—

blood and spinal fluid Wassermann, negative. Urine shows trace of indican only.

The condition rapidly grew worse and on May 2 the patient was removed to the hospital, but as no improvement was noted the friends took the patient to her home on May 26, where she died on May 27. It was not possible to secure permission for an autopsy.

The most notable feature in the examination of these patients was the finding of immense numbers of the torula in the cerebrospinal fluid by direct microscopic examination and the securing of a pure culture of the characteristic organisms on artificial media.

It seems from an examination of the reports of the seven previously reported cases that in none of these were successful cultures secured from the fluid obtained by spinal puncture, although in one case organisms having the characteristic morphology were seen.

Attention should be called to the danger of failing to recognize the presence of these organisms in the direct microscopic examination of specimens of spinal fluid on account of their superficial resemblance in size and shape to lymphocytes.

The recognition within a comparatively short period of these two cases with characteristic symptoms and having the specific organism in the cerebrospinal fluid, as well as the fact that the organism may easily be overlooked, would lead one to suspect that this type of meningeal infection may be of fairly frequent occurrence and be escaping discovery.

CONCLUSIONS

The torula infection on account of its peculiar localization in the meninges and its characteristic symptomatology may justly be looked upon as a clinical entity and a specific infectious disease.

It is important in cases with intracranial and meningeal symptoms of unknown nature to carefully examine the cerebrospinal fluid by direct microscopic examination and by cultural methods.

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Relapsing Fever in California—LeRoy H. Briggs, San Francisco (Journal A. M. A., September 16, 1922), reports the cases of a man and his wife who, while camping in California, were probably bitten by some suctorial insect, presumably a bedbug or a tick, although this cannot be proved. In each case, eight days later, a paroxysm of chills, fever, malaise and prostration ensued and lasted three days. In the case of the husband, three relapses occurred, each more severe than the preceding. With the wife, two relapses occurred, also of increasing severity. During the four observed paroxysms, spirachetes were found in the peripheral blood in increasing numbers. Intravenous injection of 0.45 gm. of neo-arsphenamin promptly terminated the infection in both instances.

THE RELATION OF THE SURGEON TO THE ANESTHETIST*

By SAXTON POPE, M. D., San Francisco

As a matter of fact, anesthesia was forced upon surgery by a rank outsider, and so it seems to be ever since.

Preoccupied with the problems of visceral pathology and the means to remedy them, the surgeon's mind has worked more with the faculty of contrivance than the comfort and safety of his patients.

In the very essence of things, it is more important to him that he should achieve his objective than that the patient should be made comfortable during the journey. Ordinarily he is not interested in the subjective reactions of the client, only the clinical.

Through custom, the surgeon has come to accept the necessity of anesthesia, partially because it assists him in his work. But you can see even today the viewpoint of the average operator to whom anesthesia is a necessary nuisance. He stews and frets until his patient is ready for the knife, while the subservient assistant struggles with the powers of darkness and holds the trusting subject in a state of vital suspension between heaven and earth.

The anesthetist having achieved this miracle of physiologic juggling, the surgeon then bullies him for the slightest variation of balance.

During the progress of the operative readjustment, a hundred acts of surgical vandalism may be committed, each with its special, painful, shocking result, and yet the patient must not wince, nor flutter from the normal.

The opportunities for trauma are infinite in variety. From the first cold dash of alcohol and ether on the skin, through an endless series of destructive insults, to the final freight handling change from the operating table to the stretcher, the patient must be protected by a veneer of analgesia—and the anesthetist is responsible.

Consider some of the other adventures of this somnolent victim:

Lying on his back in a position well calculated to throw his sacro-iliac joints out of commission, his arms strapped to his sides, his neck in a posture inviting cervical fracture, the assistant surgeon leaning heavily on his chest or hanging on to an elevated leg, unconsciously attempting to dislocate the hip joint, he winds up by being a fit subject for a chiropractor.

The surgeon is late as usual, deliberates and makes up his mind what he wants to do; shall he do his latest operation and add another successful case to his series, or shall he take the proffered opportunity to discover what really is the matter with the patient and have to worry about the means to correct it.

If he is an intrepid surgeon, he then rushes at his task. Let us not critically down them all for these little slips in technique that require so much time to repair—accidents will happen in the best of families, and let us not broadcast it that such things are possible in modern science; but you

* Presented to Section on Anesthesiology of the Medical Society of California, May 16, 1922, at Yosemite National Park.

know, and I know—in spite of the fact that I am an alleged surgeon—what one might call an imminent surgeon. We shall not advertise our mistakes, but confess them only to our charitable equals, knowing that no matter how bad we may be, our critics undoubtedly are very much worse.

The great thing is that we are here dealing with human life instead of pancakes—and not even the best cook can make 100 per cent successful hits on a pancake. There is no surgeon without his faults and his faux pas. The best thing we can ask of our man is that, when he has us on the table, exposed to public view, that he will treat us like a friend, and not like an enemy or a cadaver.

And there lies the soul of the matter, let him remember that he is dealing with the most wonderful phenomena of the universe—life itself. In his hands are placed the fragile beauty of existence. One false move on his part and it disappears forever. How is it that this remarkable adventure is possible? The arbiter of this state of surgical privilege is the anesthetist. Without the volatile cup of Lethe, surgical operations would be unutterable crime.

Pardoning our blunders and humbly confessing our dependence upon the agent of oblivion, let us see what are our mutual relations and obligations.

In the first place, the anesthetist is entitled to that courtesy offered a consultant. She or he is an equal—in that these two must share the responsibility of conducting the patient safely through an episode of questionable outcome.

One must handle the mechanical problems of surgical procedure, the other must gauge the factors of safety, induce an unnatural and more or less dangerous period of suspense, and meeting every possible emergency of physiologic discord, conduct the human organism back to conscious activity. It is no small or elementary task. It requires that the anesthetist shall know intimately the most subtle functions of the brain, a knowledge of the gross reactions of respiration, cardiovascular phenomena and the surgical complications incident to the occasion, are but the bare essentials of his requirements. He must be wise in the psychology of the pre-operative stage, keen in his intuition of personal idiosyncrasies, and abnormal response. He must gauge the temperament of his patient. Incidentally, he must be able to check up the internist on the functions of the heart, vital capacity, renal elimination, blood dycrasiae, cerebral lesions, and a multitude of other factors having an important bearing upon the problem of narcosis.

It is essential that the anesthetist know the approximate nature of the surgical operation proposed. He must also know the severity of it, the time factor and, incidentally, the character of the surgical chief and his type of work. The anesthetist must choose the anesthetic, because he is responsible for the outcome of this feature of the problem. No stereotype narcosis exists which is suitable to all somatic conditions and varieties of surgical maneuver.

During the progress of anesthesia, the anesthetist, like an engineer in a great steamship, must watch a score of indicators and, through a fundamental knowledge of physiologic phenomena, be able to interpret the slightest deviation from the stage of safety. No routinist, no tyro, no cocksure, innocent and blissfully ignorant neophyte should conduct this department of intelligence.

Each phase of a surgical operation differs in the necessary depth of anesthesia, and as the periods drag out, the saturation of the patient increases, his resiliency departs, where fatigue of the operator, the anesthetist and the patient all must be counted on, then the anesthetist must use rare good judgment in the conduct of the situation. As the operator undertakes each special manipulation, the anesthetist must anticipate it with an appropriate counter move—whether it be deeper narcosis, more air, rebreathing or increased intra-thoracic pressure.

It is the duty of the surgeon to forewarn the anesthetist of any departure from the routine, of any delay or prolongation of the seance.

And he must stay within the bounds of surgical anesthesia.

There is a zone of legitimate activity in surgical work; there are areas and systems that may not be invaded, and there are narrow outer boundaries of anesthesia over which the operator shall not trespass. Over this domain the anesthetist must stand guard, and, as the evidences of trauma are registered on the sensitive indicators of his conning tower, he must sound the note of warning and protest.

Here the dictatorship of the surgeon ceases, and the authority of the man who guides the destinies of cerebral and vascular control must supersede. Again they are consultants, and equals. There can be no dominance of master over assistant.

But in the absence of these untoward episodes in the progress of a surgical operation, when all runs smoothly and safe as it usually does, there is no question of leadership but perfect co-operation and peace, marked by the utmost courtesy and mutual regard. This insures the patient against the dangers of an irritable surgeon and a perturbed anesthetist.

And what excuse have I for these trite phrases; what apology for telling you what you already know? It is this that, as you patiently sit through the dreary hours of serving and saving while other men display their egotism and claim the glories, I want you to know that there are surgeons who recognize your value and your independence, that when we stop to think, we acknowledge your part is as important as ours, and in the mind of the patient often overshadows it.

On behalf of surgeons, I want to pay homage to our co-partners in service to humanity.

(Butler Building.)

California Association of Medical Social Workers—This association has outlined a course of intensive study and round table conferences upon the following subjects: (1) Housing and Immigration Law, (2) Children's Aid Law, (3) Industrial Accident Insurance, (4) Study of Case Work. The study group meeting will be held in the assembly hall of the Children's Hospital Nurses' Home, San Francisco.—Edna Shirpser, Secretary-Treasurer.

POST-INFECTIOUS OR EPIDEMIC ENCEPHALITIS*

REPORT OF THE TREATMENT OF A GROUP OF CASES BY THE INTRASPINOUS INJECTION OF THEIR OWN BLOOD SERUM.

By ROSS MOORE, M. D., Los Angeles

The first case seen by the author during the present epidemic developed in the wards of Base Hospital No. 214 at Savenay, France, in January, 1919.

A year ago I had seen a sufficient number of cases to be able to group them roughly into four clinical classes. (1) Fulminating and quickly fatal cases, (2) acute cases terminating after a few weeks in fairly complete recovery, (3) slowly developing cases ending in chronic disease syndromes, (4) cases more or less chronic in which the symptoms show a tendency to come and go.

This fourth class interested me particularly because it seemed reasonable to suppose that in it the pathological condition must be one of irritation or poisoning rather than destruction.

The second class of cases, those ending in a fair degree of recovery after a few weeks or months, was considered also as being primarily toxic or irritative. It occurred to me that if I could in some manner stimulate the powers of resistance of the affected parts of the brain in these so-called toxic or irritative cases, I might start the process of recovery or at least help it along. Unfortunately this idea was developed at about the time our local epidemic began to wane. Only a few cases have, therefore, come under observation in which it was possible to carry out this experimental treatment.

Eight cases compose the series. Thirty-nine treatments were given in all. The highest number of injections in a single case was eleven. The technic in general was as follows:

A sufficient amount of blood was taken from the patient to give 30 cc. of serum. This was treated in the usual laboratory way to prepare it for injection. In some instances the serum was inactivated and in others not. It was then injected intraspinously after an equal amount of cerebrospinal fluid had been removed. These injections were repeated at intervals of four to twenty days. Their repetition depended on the clinical symptomatology developing after each injection. The first and in some respects the most interesting case came under my observation May 24, 1921.

CASE REPORTS

Case 1.—Mr. J., age 34, married, two children. Referred by Dr. J. H. Edmiston, Los Angeles.

Complaint:—Nervous breakdown and fatigue. Wants to lie down constantly. No ambition. Does not sleep well. Tendency to yawn occurring in spells especially when lying down. Also spells of coughing not associated with throat or lung pathology. Attacks or Diplopia of irregular severity and duration.

Inquiry into history shows that these symptoms have existed in varying intensity for eighteen months dating, as patient believes, from a chill one night. Influenza in the first epidemic of 1918-19. Was two months recovering from it.

Family history not important.

Examination:—Examination shows normal weight and state of nourishment. Tremor of hands and tongue. Deep reflexes exaggerated. Relative left facial weakness. Fundi show no pathology. Pupils small and mobile. Spinal fluid negative for cells, Butyric and Wasserman. During examination patient complains of muscular twitching all over body but none visible to examiner. Patient hopeless and very irritable.

Excerpts From Daily Clinical Notes

June 4 (nine days after first examination)—When out of bed patient wants to sit or lie down all the time. Considerable retardation of initiative. Muscular action slowed up. Facial expression somewhat masklike.

July 1—Above conditions noted as being deepened.

July 18—Patient has become quite sluggish. Stays in bed. Frequent coughing and yawning spells day and night. Spinal drainage performed.

July 19—Patient slightly brighter, possibly as a result of spinal drainage.

July 25—Patient lapsed into former condition. Masklike face. Lead-pipe rigidity which, however, can be quite overcome by voluntary effort. This rigidity returns at once when attention goes elsewhere.

August 1—Spinal drainage with slight passing amelioration.

August 5—Twitching of right face noted. Not constant. Double ankle clonus and Babinski. Also not constant. Marked lethargy and drooling. Wife and friends considered patient much worse than ever before.

August 6—Lethargy much deeper. Taken to Hospital.

August 8—Injection of 28 c. c. of 60 per cent inactivated serum.

August 9—Slight pain in back and legs. Patient quite bright and alert. Demands to be taken from Hospital. Rigidity and lethargy markedly lessened.

August 13—Injection of 20 c. c. straight serum.

August 14—Patient much brighter. Moves, talks and smiles without retardation. Lead-pipe rigidity much reduced. Marked absence of former muscular tension. Twitching in right face continues.

August 18—Injection of 30 cc. inactivated serum.

August 20—Patient up and about with further reduction of symptoms.

August 21—Danced two or three times.

September 14—After three weeks at home, patient returned with appearance of having slipped back somewhat. Was given 30 c. c. of straight serum.

September 15.—Up and about. Better.

September 25—Had a fainting spell. 30 c. c. straight serum.

September 26—Much relaxed. Up and about.

October 1—Frequent attacks of momentary syncope and of yawning.

October 7—30 c. c. straight serum. Slight reaction for the better.

October 11—Spinal drainage.

October 29—General condition same as for two or three weeks. Patient refused to remain in Los Angeles longer and returned home.

A recapitulation of this case shows a condition

* Read before the Fifty-first Annual Meeting of the Medical Society of the State of California, Yosemite Valley, May, 1922.

in which a diagnosis of Encephalitis was reasonable. During the first weeks of observation there was an increase of symptoms to such an extent that the patient's life was despaired of. Spinal drainage during this time had no effect on symptomatology. Both history and observation revealed a marked tendency for symptoms to disappear and return.

Six intraspinal injections were given over a period of two months.

Following each of the first three of these injections a marked amelioration of symptoms occurred so that the patient changed from being bedfast, sluggish, rigid and apparently progressing toward the end of his life, to being able to take part in a dancing party. This improvement did not occur steadily but always following intraspinal injections. Three more injections made after an absence of three weeks provided temporary relief only. The patient became increasingly hard to manage and finally went home. His present condition is reported to be somewhat better than during the eighteen months previous to the treatment.

The most striking features of this case are, first—the coming and going of symptoms, such as diplopia, yawning, coughing, sleepiness and insomnia; second—the apparently causative relationship of intraspinal injections to what was actually spectacular although temporary recovery.

Case 2—Mrs. K., age 43. Referred by Dr. Marcia Patrick.

Mental confusion, motor instability, speech defect and condition of the deep reflexes made a clinical picture suggesting Paresis. History and serological findings pointed away from this conclusion. Encephalitis was diagnosed after a few days' observation.

Acute gall bladder drained ten days after first observation.

Patient recovered sufficiently both surgically and medically to be sent home.

Symptoms returned fifteen weeks after first observation.

30 c. c. inactivated serum used without any noticeable result. Death in two weeks after recrudescence of symptoms and eleven days after serum injection. Diagnosis confirmed post-mortem.

Case 3—S., age 54. Referred by Drs. Adams and Thuresson, Riverside, California.

History—Serious illness of undetermined nature but with temperature, in January, 1920. A second like attack six months later. From date of first attack patient has never been well but has gradually slipped into his present condition.

Examination—Patient shows a Parkinsonian syndrome with definite psychic rigidity and lacking usual agitans tremor.

Was given a series of two inactivated and nine active serum injections over a period of three months. Went home somewhat improved in speech. Could feed himself and roll over without assistance. Initiative definitely improved. Muscular rigidity unimproved.

Case 4—K., age 43. Referred by Dr. Wm. A. Edwards, Los Angeles, Calif.

A quite typical Parkinsonian syndrome of long standing and with a history of Influenza two years ago.

Received two intraspinous injections of his own serum, but would not remain in hospital and was lost sight of. Probably no improvement.

Case 5—Mrs. H., age 43. Referred by Dr. Rae Smith, Los Angeles, Calif.

A typical Paralysis Agitans without history of infectious disease. Shaking began directly after terrific fright in burning building in 1919. This patient had observed the progress of Case 1 so was willing and anxious to try the treatment.

Was given three injections of her own active serum.

Patient was of sanguine hopeful nature and insisted she was much relieved of her feeling of tenseness, especially for two or three days following each injection. No objective improvement noted.

Case 6—S., age 38.

Typical Paralysis Agitans beginning six months after Influenza in 1918.

Five injections of active serum in November and December 1921, three years after Influenza and two and one half years after first symptoms.

Both wife and patient himself noted improvement in certain symptoms that had steadily progressed in intensity for a year or so previously. This improvement was temporary.

Case 7—T., age 34. Referred by Dr. Roy Thomas, Los Angeles.

Fairly typical Paralysis Agitans with coarse tremor, rigidity, mask face, drooling, high pitched voice and spasmodic speech.

Influenza in November, 1918.

In October and November, 1921, was given four intraspinous injections of his own active serum. Drooling entirely stopped. Handwriting better.

Case 8—Married. Age 49. Mine foreman.

Complaint: Tremor in right arm.

History: Light attack of influenza in 1919. History otherwise negative. In 1917 right hand began to tremble and the movements became slow. No pain or loss of muscular power.

This patient was seen first in 1920 and given the ordinary treatment for paralysis agitans with no real relief. In June, 1922, he came back to Los Angeles. At that time examination showed an intensification of the Parkinson type of symptoms in the right hand and with a masklike rigidity of face. Cerebrospinal fluid was negative to all tests. During the period from June 22 to August 24, 1922, he received a series of seven intraspinous injections of his own serum. He returned to his work in much better general health, with a definite relaxation of his facial expression and with a small but definite betterment in control of right hand and arm. After each injection his hand was very much steadier for from two to five days. This was noticeable both subjectively and objectively. The patient was a very commonsense person who was not likely to become enthused and, therefore, see improvement when there was none. The improvement in both facial expression and in his hand was noticeable to many persons who saw him constantly during the period of treatment.

Diagnosis: Parkinson's Disease.

Recapitulation: A typical case of Parkinson's disease which had existed for upwards of five years with a gradual tendency to get worse was treated by this method with some apparently permanent results and very marked temporary amelioration of symptoms.

In this series of eight cases there were three in which a definite variability of symptoms appeared. The other five cases had unchanging or gradually progressing symptomatology. In five cases certain changes noted following treatment seemed to be due to the treatment. No cases were cured. The only case that could reasonably be called acute was No. 2, a woman of forty-three, whose first symptoms appeared three months before this treatment was given. Her condition was desperate when the single intraspinous injection was made. She did not react badly to the injection but died of her encephalitis eleven days after its use. Serum intraspinously seemed to have had no influence either for good or bad in this case.

In the first case there was little room to doubt that the remarkable improvement manifest after

each of the first four injections was directly due to the treatment.

In Case 3, a Parkinsonian syndrome that showed variability in symptoms, definite improvement manifested itself gradually throughout the whole course of injections. An improvement, temporary to be sure, but vouched for by the wife of the patient, a graduate nurse, as being different from any changes she had noted during the many months of previous illness. Although this patient was a born pessimist, he realized his own improvement at the time.

The amelioration of symptoms following each injection given in the Agitans case (Case 8), together with the more or less permanent betterment at the end of the treatment, should be interpreted as indicating that symptoms in Parkinson's disease are not necessarily due to destruction of brain tissue, however long they may have existed.

So far as these particular individuals are concerned no certain permanent benefit has resulted from this treatment. However, some interesting speculations may be indulged in when the general subject of acute or infectious or epidemic encephalitis is considered in the light of this experience.

There must be a time during the course of encephalitis when the disease is attacking the central nervous system, but before actual destruction of brain tissue has occurred. It is reasonable to suppose that this period may be marked by variability of symptoms.

If the therapist could seize the psychological moment when nature needed but a little reinforcement to gain a victory over the encephalitis and throw in just the reinforcement needed he would indeed be the proper ally for nature. It would seem from Case 1 that the patient's own blood serum almost provided this reinforcement. The failure to cure may have resulted from the fact that the brain tissue itself had been subjected to insult too long or that a stronger reinforcement was necessary. I have considered using a foreign serum or the mixing in of a chemical irritant such as mercury or arsenic, but have not done so as yet. The fact that in Cases 1 and 8 the greatest relief appeared after the third injection gives rise to interesting biochemical speculation.

CONCLUSIONS

1. Expectant treatment of epidemic encephalitis is frequently unsatisfactory.

2. At the same time no other treatment has been found to be more available and useful.

3. The blood serum of patients suffering from encephalitis has been used intraspinously thirty-nine times in this series without untoward result.

4. The cases in which it has been used have been for the most part of very long standing and, therefore, likely to have had definite destruction of tissue.

5. In five out of seven cases temporary but definite improvement has followed these injections.

6. These results may be due either to the irritating effect of the injections, or the blood serum may contain therapeutic properties not present in cerebrospinal fluid.

7. Theoretically there should be a time when such treatment would be particularly helpful. This period is probably after the acute onset and before the symptomatology has settled into an unvarying syndrome.

8. *The results in this series of cases, and especially in Case No. 8—Parkinson's disease—suggest that symptoms in chronic central nervous disease usually looked upon as permanent may not be so. They may be due to the overwhelming and consequent paralysis of nerve tissue by toxic substances. Early relief of such irritation may result in recovery.*

THE OLD CHESTNUT OF THE CHINESE THEORY OF MEDICAL PRACTICE APPLIED

The World's Work, September, 1922, in an editorial states: "It used to be the custom of popular writers on health and medical topics to begin their articles with a reference to the Chinese system of medical practice. According to this the Chinese paid their doctors not for curing them but for keeping them well, and, like many of the ideas of the inscrutable Oriental, this conception is sound philosophy. This is shown by the fact that it is rapidly being incorporated in American medical practice, for it is the idea which forms the basis of modern conceptions of preventive medicine. More and more medical practice is being influenced by the belief that it is the chief business of the profession to prevent disease and that its mere curative activities are of minor importance."

Quite a number of writers in the public press are emphasizing the increased importance of preventing disease and are considering the treatment of disease of "minor importance." Statements of this character are amazing, because anyone who cares to take the trouble to investigate finds that never in the history of the world was there more sickness than there is today. The number of physicians are increasing, the number of hospitals are rapidly increasing, the agencies of medicine are being multiplied, and still one of the principal legitimate criticisms is, that competent medical facilities are not available to all of the people.

Articles of the character of this editorial are, of course, essentially propaganda for that school of "advanced thought" who are trying to deprecate the "doctor of medicine" and to substitute for him the new revised and up-to-date "sanitarian."

With some thirty million people ill this year in the United States, with a hundred and twenty thousand sick every day in California, the services of good, conscientious physicians who understand pathology and whose treatment of illness is based upon education and experience, were never more needed than they are now. It is a fact that every one of the six thousand physicians in California also is doing all that he can do to prevent illness. He has been educated to discharge this duty as he has that of treating disease, and he will continue to be the family and community health officer in the hearts of the people of this State long after the "sanitarian" has perished with waiting for the promised millennium that is not yet in sight.

TRAUMATIC DISLOCATION OF BOTH TESTICLES

REPORT OF CASE

By C. LEWIS GAULDEN, M. D., Los Angeles

A very careful search of medical literature shows this condition to be so extremely rare as to warrant a report of this case. I can only find five cases reported of complete dislocation of the testes.

CASE REPORTS

History—J. E. W., white, age 32, married and the father of three healthy children. Denies all venereal diseases. Passed U. S. Army examination and also employee's examination as given by Southern Pacific Railroad Company. He is sure that both testicles were in their normal place in scrotum prior to accident to be subsequently described.

While at work as brakeman on a log train, logs became loosened in some way and patient was thrown from car and pinned between two logs, compressing his abdomen, also both bones of his right leg were broken at its lower third.

Examination—On admission to hospital two hours after accident, I found patient very much shocked with pulse weak and thready and in rate from 130 to 140. Temperature sub-normal, and systolic pressure 90. Patient had vomited once. He complained only of pain in groins and scrotum and exclaimed, "I have ruptured myself."

Patient's face had rather a pinched expression, abdominal muscles were held rigid. Masses could be felt on both sides in regions of inguinal canals that were very sensitive to touch. Scrotum about the size of an ordinary baseball, soft in consistency and very much discolored; however there were no external marks of injury to scrotum. The testicles were both absent from scrotum, and in fact nothing could be felt in scrotum except apparent blood clot.

Both testicles were found in inguinal regions. Patient was put to bed and treated for shock and expectantly. By manipulation of right testicle by both patient and myself, we were able on third day after accident to replace testicle in scrotum.

The left testicle, however, we could not move and eight days following accident under ether anesthesia I operated on left side. The usual hernia incision was made and the testicle was found beneath the skin and superficial fascia on top of external oblique aponeurosis. Veins of the cord were lacerated and thrombosed. The testicle lay about 1½ inches above the external ring. There was no visible damage to epididymis or vas.

The testicle was replaced into scrotum and patient made uneventful recovery and resumed his position as a railway brakeman.

Standardization—Why is it that the same men who detest socialism will accept standardization in principle and practice? If standardization means anything it means a soft pedaling upon individualism. From either a philosophic or a practical standpoint there is no essential difference to be distinguished between the principles of economic and political standardization and those of scientific standardization. In the one case you are supposed to create a sample citizen who will function, cog-like, with exactly similar fellow citizens, within very definite, prescribed limits, and who, in return for his stereotyped service, will be insured against idleness, ignorance and penury by the State. In the other case you are supposed to create a sample surgeon, an automaton who can be depended upon to function competently, just like all his fellow surgeons, within prescribed limits, and who will be insured against distinguished achievements by the American College of Surgeons.

All these gentry ought to embrace socialism naturally and affectionately.—The Medical Times, October, 1922.

FOREIGN BODIES IN UPPER AIR AND FOOD PASSAGES *

A CLINICAL REPORT

By HARRINGTON B. GRAHAM, M. D., San Francisco

What Jackson said in 1915 concerning the armamentarium in bronchoscopic or oesophagoscopic work is still pertinent, in spite of the advances made in the mechanics in this field. He then said that there was no one set of instruments which could be considered the best for all work or for all men: that it was more the man behind the instruments that was going to save life rather than the instrument itself. If one has at his disposal the large tubes of Mosher, as well as the small ones of Jackson and has practiced with both, he will certainly choose the Mosher tubes for the examination of an oesophageal carcinoma in an adult, and the Jackson tubes for a foreign body in the bronchus of an infant.

The advantages of a proximally lighted tube for diagnostic purposes are, it seems to me, beyond a doubt but the disadvantage in the dispersion of light from an instrument introduced into this tube during the removal of a foreign body tends to render it far less serviceable than the distally lighted tube. Skill in the handling of any of the instruments can only come with painstaking practice, and the best results will certainly follow through a skill acquired in the use of a variety of instruments. Our ultimate purpose is to save life with the least damage to the tissues involved, and with the least strain on the patient; not to satisfy our egotism by a claim that a foreign body has been removed with the smallest tube in the shortest time on record. If by using a small tube the patient is subjected to three seances, whereas had a larger tube been used it could have been removed in one, it were better to have chosen the larger diameter tube. Each case must be judged by itself, and that method or instrument selected which will best fit the circumstances and conform to the skill of the operator.

In analyzing my cases I have been surprised at the large number of unorthodox methods used, and still out of forty-three cases of foreign bodies there has been but one death, a mortality of 2.3 per cent or 5.8 per cent of the bronchoscopies. For instance, in two cases (Nos. 1 and 32), I resorted to a low tracheotomy in order to reach the foreign body; in both cases a prolonged effort had been made to get the article, and in each case it was readily extracted through a tracheotomy opening. Again, a fluoroscopic bronchoscopy was done twice, once unsuccessfully and once with a most satisfactory result. The successful case (No. 33) had been tried under local anaesthesia a year before, but there was such a large quantity of pus present that there was but little chance of locating the article, a shirt stud, by vision. Under ether, with the fluoroscope a tube was passed readily to the article, and later a forceps, which was closed upon the stud and a successful result obtained. The stud had been in the left lower lobe for twenty-three years, and granulation tissue had formed over it. No effort was made to remove the granu-

* Read before the San Francisco County Medical Society.

lations as Jackson had done in a similar case, as the probe passed so easily. At no time was the foreign body seen through the bronchoscope, but the forceps seemed to enter a cavity when passed to it, and there seemed to be little chance of grasping lung tissue.

Unorthodox methods do not necessarily mean poor judgment. They may mean a less skilfull technic, but perhaps a more rational safety for the patient. I have seen a little patient go back to bed in shock after a struggle with the overzealous staff of physicians who were attempting to pass a tube without an anaesthetic, whereas a little ether would have quieted the nerves of both the physicians and bystanders, to say nothing of the patient. It is one of the triumphs of surgery that this can be done so easily by the skilled endoscopist. It is one of the tragedies that it should be tried by the less skilled in a well-intentioned but ill-advised effort to save the child or show his prowess.

There have been foreign bodies which, if dislodged, would close off the only lung tissue which was functioning where it was extremely desirable to operate without an anaesthetic, but these cases are few and far between, and I believe that, with the bronchoscope in such universal use as at present, that it would be far wiser to advise the use of an anaesthetic until the requisite skill had been acquired. After the tube has once been introduced, we all have found that it takes but little ether to continue the work indefinitely, especially if cocain is used at the distal end of the tube. All of my cases under six years of age save one, two cases of the five between six and twenty years of age, and two of the twenty-five above twenty years of age were etherized. All of the others were cocainized, save a baby of eight months on whom an oesophagoscope was passed. For diagnostic or treatment purposes, strictures, carcinoma, thyroid, asthma, a number of cases have been examined without an anaesthetic, but with indifferent success.

In the diagnoses of these cases some interesting facts were brought out. In five cases (2, 21, 27, 32, 38; metal whistle, gold crown, primer, pine-nut, blanched almond) a whistling could be heard, in three near the patient and in two across the room; in each case it had been observed by the family before seeking the doctor. This whistle immediately disappeared on removal of the foreign body. It has been the solid bodies which nearly occlude the main bronchus, which apparently produce this whistling sound.

In Case 3 the patient insisted for years that he had a tack in his lung, but was laughed at by his doctors. It remained in twenty years, causing hemoptosis, night sweats, pus expectoration, and fever.

Case 33 was accepted in the army after an extensive lung examination, including a radiological examination on account of the claim of the patient. After entering the army, further X-ray pictures were taken with a negative result. After discharge from the army, at which time he says he was declared to have had normal lungs, he developed a lung abscess and fell into my hands. A radiograph showed clearly the metal shirt-stud in the left lower lobe bronchus of about the fourth degree.

In Case 32 the radiograph showed an uneven edge at the top of the primer, which should have been interpreted as a closure of the top. The error in not so interpreting it cost the child a number of seances. Too much emphasis cannot be laid upon a prolonged and careful study of every element connected with the diagnosis of the character, size, shape, and location of the intruder before any attempt is made whatever at removal, for at times the simplest element may be the secret that effects the solution of the problem. A hurried diagnosis and an eagerness to get at the case has been the only cause, I believe, of many a failure. The mere presence of a foreign body is seldom a tragedy, but a failure to get it at the first sitting may be.

A diagnostic symptom, which has been held of value in these cases, is a sudden spasmodic cough in a child which has been previously well, but this sign pronounced in its suddenness was present in a child of two years in whom no foreign body was found, and who passed through a typical attack of lobar pneumonia, so that one cannot rely entirely on such a history.

Special points of interest noted in the treatment of this series of cases are:

Case 17—A gold clasp-pin, lying open in the left bronchus of a nine-months-old child, was so manipulated as to bring the point of the pin into the tube, the body of the pin was then grasped and pulled through the tube. For two days there was a temperature of 101-103, and considerable difficulty in breathing, relieved by a steam tent. Subsequently, the child made an uneventful recovery.

Case 18—A case of an open safety pin in the upper third of the oesophagus of an eight-months-old child. Again, the point of the pin was brought into the lumen of the tube, the body of the pin grasped and the pin partially closed, the tube and pin being brought out together.

Case 23—The open safety pin was at the lower end of the oesophagus in an eight-months-old child. I had no pin-closer which would pass through the tube, and as the surroundings were unfavorable, I judged there would be more trauma in an attempt to extract perorally than there would by an incision through the abdominal wall. I, therefore, passed the oesophagoscope after an incision had been made and pushed the pin down onto the finger of the surgeon. The whole operation took twenty minutes, and the child made an uneventful recovery.

Case 22—Was that of a bullet in the antrum. The surgeon, while operating under ether with a fluoroscope, lost the lead, which dropped into the right bronchus. I was called to the hospital, and introduced the tube while the patient was still under the ether. It was a strange and fortunate coincidence that where a fluoroscope was so necessary it was being used for another purpose.

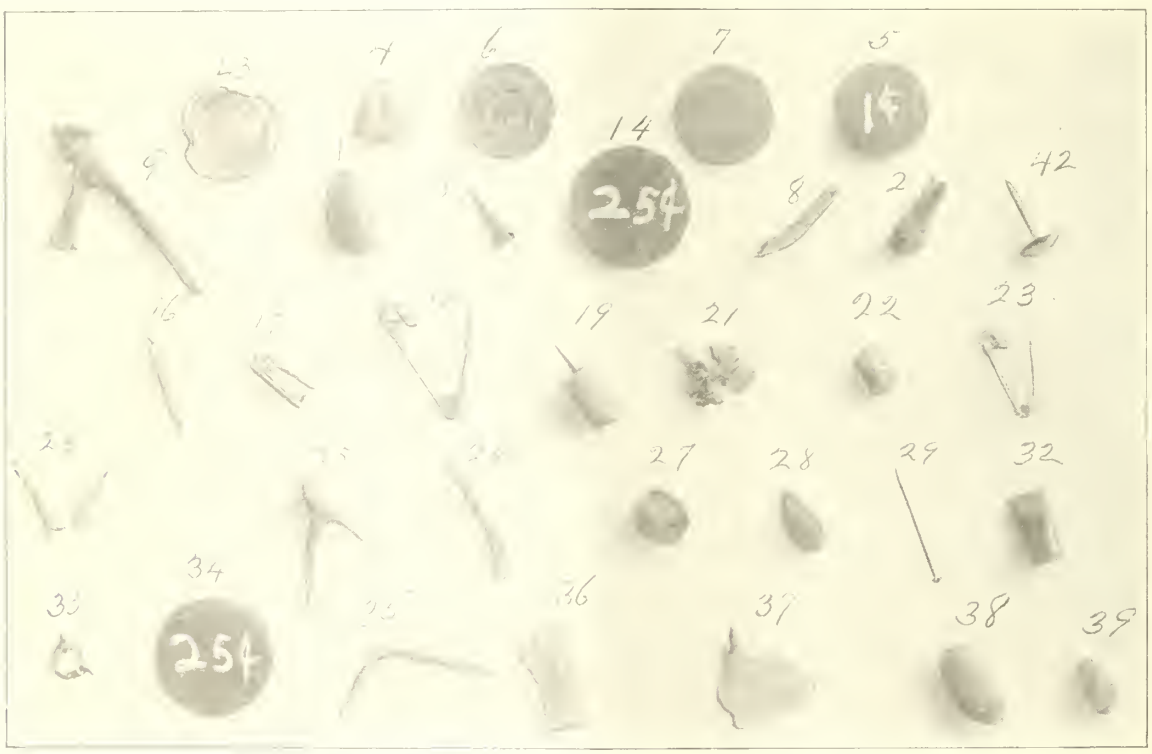
Case 24—Was a series of tragedies. The patient, an adult, had swallowed a chicken bone, which had lodged in the upper portion of the oesophagus, and after three days produced an abscess in the neck. The bone was removed under local anaesthesia, but in so doing a porcelain tip of an incisor tooth was broken off and slipped outside of the tube into the abscess cavity. Three unsuccessful efforts were made to reach it perorally, during one of which the tip of one of the forceps broke off, lodging in the oesophagus and necessitating its removal. An effort was now made to reach the porcelain through an incision in the neck. At no time were we able to feel the article, but the manipulation evidently forced it into the oesophagus as an X-ray subsequent to our operation showed an absence of the porcelain. An ill wind seemed to be following this patient, as while I was working on her, her mother aspirated a small fruit pit and was about to submit to a bronchoscopy when, after three days, she coughed it up.

Case 25—Was a wish-bone, which had been pushed into the larynx by digital manipulation, lodging in the sinuses of Morgagni in such a way as to be nearly invisible to the mirror. It was extracted by the indirect method, causing a sensation of astonishment to the operator as it gradually unfolded itself; part of the bone was broken off after extraction, so it does not show in toto in the illustration.

Case 27—A gold crown was found in the left bronchus of an adult, with the open portion up so that it was easily grasped. It would not pass through the tube, however, and caught at the glottis; an effort was made to manipulate it through the glottis, during which it slipped off the forceps, dropping, fortunately, into the oesophagus, and was promptly swallowed.

Case 32—A child of four years, with a 22 primer in the right bronchus, had four bronchoscopies (three by myself) without the operators seeing the foreign body. The only explanation I can give is that the primer was lying close to the lower wall, and fitted so snugly that it appeared to be the carena itself. Through a low tracheotomy and a large tube there was no difficulty about locating and removing it.

Case 39—Had been shot in the face fifteen years before, and had not known that he carried the lead about with him. He came to me complaining of a soreness in the posterior pharyngeal wall, and an X-ray revealed three pieces of lead, one of which was ulcerating through. This one was easily removed, but the other two were not located, even under ether.



Case 40—While driving a machine on the highway, a man suddenly was cognizant of a stinging sensation in the throat and an inability to talk. On examination it was found there was blood on the skin over the larynx, and he was taken to the hospital. An X-ray revealed a .22 bullet imbedded in the larynx wall, evidently a chance spent shot. A surgeon made an unsuccessful attempt to remove it through an external incision, when I was permitted to see the case. To date the body remains in situ. An unsuccessful bronchoscopy was done by another surgeon in an effort to get the article.

Case 41—A child of fifteen months had inspired a tack, which had lodged in the right bronchus, and the X-ray showed it at the level of the diaphragm posteriorly. A bronchoscopy did not re-

veal the tack, and the child developed a pneumonia, from which she died five days later.

Case 42—A twelve-year-old boy came to the hospital eight days after having swallowed a furniture tack. One attempt had been made to get it, but unsuccessfully. X-ray revealed the tack in the left lower lobe bronchus. There was a temperature of 104 with remission to nearly normal each day and signs of pneumonia, leucocytes of 26,000, so that there was a delay of five days before a bronchoscopy was attempted. As the temperature did not go down, a successful attempt was made to extract the tack, the temperature immediately dropping to normal and remaining there.

The first fourteen of these cases were reported in the California State Journal of Medicine, September, 1916.

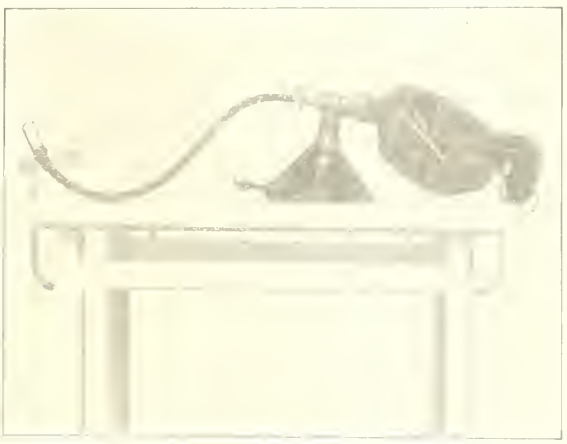
	Age	Foreign Body	Time of Sojourn	Location	Tube	Anaesthetic	Forceps	Result	Time	Route	Remarks
15 Dr. F.	30 yrs.	Fish bone	2 hrs.	Upper 1-3 oesophagus	10	Cocain	Plain	Removal	5 min.	Peroral	
16 Griffin	30 yrs.	Chicken bone	2 hrs.	Upper 1-3 oesophagus	10	Cocain	Plain	Removal	5 min.	Peroral	
17 G. Chollete	9 mos.	Gold beauty pin	4 days	Left lower lobe bronchus	7	Chloroform	Plain	Removal	20 min.	Peroral	Difficulty in breathing following removal
18 Zeller	8 mos.	Open safety pin	24 hrs.	Upper 1-3 oesophagus	8.5	Ether	Plain	Removal	20 min.	Peroral	Tube passed by pin once into oesophagus
19 C. D.	12 yrs.	Rubber pencil tip	7 days	Left lower lobe bronchus	10	Ether	Plain	Removal	10 min.	Peroral	Attempt made by another surgeon
20 S. C.	8 mos.	Open safety pin	2 days	Oesophagus	7	None		Not seen passed into stomach			Baby passed pin in stool
21 Kalsbeck	1 yr.	Blanched almond	14 hrs.	Trachea at bifurcation	7	Ether	Plain	Removed in pieces	8 min.	Peroral	Attempt made by another surgeon
22 D. C.	30 yrs.	Lead bullet	1 hr.	Right lower lobe bronchus	10	Ether	Plain	Removal	10 min.	Peroral	Accident occurred while under ether
23 E. C.	3 yrs.	Open safety pin	3 hrs.	Lower 1-3 oesophagus	8.5	Ether	Plain	Removal	20 min.	Gastrotomy	Pin pushed into stomach
24 Miss B.	30 yrs.	Forceps, chicken bone, tooth	5 min. 5 days	Upper 1-3 oesophagus oesophagus	10	Cocain	Plain	Removal			Three foreign bodies in one case
25 Eyre	30 yrs.	Chicken bone	22 hrs.	Larynx		Cocain		Removal	10 min.	Peroral	Removed by indirect method
26 Mrs. F. Smith	25 yrs.	Chicken bone	23 hrs.	Oesophagus	10	Cocain	Plain	Removal	5 min.	Peroral	Removed by the cocainizing brush
27 Maloney	40 yrs.	Gold crown	2 hrs.	Left lower lobe bronchus	10	Cocain	Plain	Removal	10 min.	Peroral	Crown dropped into oesophagus
28 Edwards	12 yrs.	Watermelon seed	3 days	Left lower bronchus	8.5	Cocain	Plain	Removal	10 min.	Peroral	
29 V. C. 1	25 yrs.	Pin	1 day	Left lower lobe bronchus	10	Cocain	Plain	Removal	5 min.	Peroral	
30 V. C. 2	20 yrs.	Chicken bone	2 hrs.	Middle 1-3 oesophagus	12	Cocain	Plain	Removal	5 min.	Peroral	
31 V. C. 3	25 yrs.	Meat	1 day	Oesophagus	12	Cocain	Plain	Removal	5 min.	Peroral	
32 Riley	4 yrs.	Primer	4 weeks	Right lower bronchus	7.5	Ether	Plain	Removal	4 attempts 1 hr. each	Tracheotomy	One attempt by another surgeon
33 Archibald	24 yrs.	Shirt stud	23 yrs.	Left lower lobe bronchus	10	Ether	Double curette	Removal	2 attempts 30 min.		Under flouroscope. Former attempt by self
34 Graham	3 yrs.	25 cents	3 hrs.	Oesophagus	8.5	Ether	Plain	Removal	10 min.	Peroral	
35 Lamb	50 yrs.	Chicken bone	12 hrs.	Oesophagus	10	Cocain	Plain	Removal	5 min.	Peroral	
36 F. P.	20 yrs.	Fish plate	2 hrs.	Oesophagus	12	Cocain	Plain	Removal	5 min.	Peroral	
37 F. P. 2	30 yrs.	Fish plate	12 hrs.	Oesophagus	12	Cocain	Plain	Removal	5 min.	Peroral	
38 Cecchini	8 yrs.	Pine nut	4 days	Right bronchus	8.5	Cocain	Plain	Removal	10 min.	Peroral	Wheeze heard with mouth open
39 C. K.	38 yrs.	Lead bullet 3 pieces	15 yrs.	Post pharyngeal wall		Ether cocain		One removed		Peroral	
40 Englebret	30 yrs.	Spent bullet	2 days	Larynx wall		Ether		Not found			Patient seen in consultation. No attempt by self
41 J. Miller	15 mos.	Tack	5 days	Right lower lobe bronchus level diaphragm	7	Ether		Died 5 days pneumonia	1 hr.		Tack not seen
42 Rule	7 yrs.	Tack	13 days	Right lower lobe bronchus	8.5	Ether	Plain	Removal	15 min.	Peroral	Fever of 104 with pneumonia. Fever dropped with removal.
43 Murphy	40 yrs.	Tin bottle cap	1 day	Upper oesophagus		Cocain	Double curette	Removal	1 min.		Indirect method

PRELIMINARY REPORT ON ETHYL CHLORIDE ANESTHESIA IN MINOR OPERATIONS *

By LOUISE A. OLDENBOURG, M. D., Berkeley

Ethyl chloride (aethylis chloridum) is a colorless, extremely volatile liquid, with aromatic odor and sweetish taste. It boils at 12.5 C. (55 degrees F.), and so must be kept in sealed containers. The anesthetizing power of ethyl chloride was reported by Flourens in 1841, and the drug was first administered as a general anesthetic by Heyfelder in 1848. As an anesthetic it may be administered by either the open or the closed method.

The cases here reported were anesthetized by the closed method, with Daniell's mask. They comprise observations in operations of less than ten minutes' duration. When this method is employed after three or four respirations, the breathing becomes deeper and more rapid, remaining regular, deepening to a slight stertor, face flushes to a healthy red, slight perspiration may appear on the face and neck, eyeballs move from side to side,



The Daniell's Mask Used in the Administration of the Ethyl Chloride Anesthesias.

becoming fixed in a convergent squint, usually downward. Pupils are dilated and the corneal reflex is lost. The pulse is full, regular, and slow. To avoid crowding or a sudden concentrated flow of vapor, the tube containing the ethyl chloride was gradually immersed in hot water. Observations were based upon eighty-five cases of tonsillectomy and adenectomy (by the Sluder method) in patients from two to fifteen years of age, and twenty teeth extractions (some requiring gouging of roots) in patients from six to fifty-six years of age. The time of induction of anesthesia was from 30 to 60 seconds and the time from the beginning of anesthesia, completion of the operation for removal of tonsils and adenoids to the return of consciousness was from four to five minutes. The average anesthesia was smooth, without a stage of excitement or agitation, and with complete muscular relaxation. Upon recovery, in several patients, there was stiffening of the extremities and delirium, some vomiting, but no masseter spasm nor respiratory paralysis. The closest approach to this type occurred in a girl nine years of age, taking 3 cc., who held her breath for a few seconds, had twitching of eyelids, and stiffening of the extremities; but she had a quiet recovery without nausea or vomiting. A very nervous woman (forty-five years) anesthetized for the removal of a vaginal pessary, and who took 4 cc. of ethyl chloride, had clonic contractions of the extremities, with very *slow,* full pulse and retarded but satisfactory recovery. A three-year-old boy came to the operating-table with a nickle in his hand. Upon awakening, still on the operating-table, and being shown the coin, he recognized and reached for it. Children of two to three and four years of age were carried to the recovery room, the rest walked to their beds. If the throat required inspection after the operation, the little patients always responded to orders and opened their mouths. A stage of analgesia continues for some time afterwards, permitting further manipulations if necessary.

To procure success in the administration of ethyl chloride the drug must be chemically pure, the dose must be properly regulated to suit each individual case, and care must be exercised owing to the rapid transit of the drug from the second, to the third and fourth stages. Rather than to increase the amount of 5 cc. of ethyl chloride for an adult, it is advisable to add 1 cc. of ether, thereby prolonging the anesthesia without increasing the dangers. However, the dose should not be a hard-and-fast rule. The weight, height, build, and general appearance and condition of the individual should be considered and be the guiding factors. Recently, as you all know, the safety of ether and particularly chloroform, has been increased by the addition of oxygen. Gwathmey and Rice are advocators of this addition to ethyl chloride. The description of ethyl chloride anesthesia of Hewitt more or less coincides with the later work of Guedel which condition he designates *spasm type* and the *depression type.* Contrary to Hewitt, however, who states that ethyl chloride produces a fall in blood pressure and a slow pulse, Guedel claims a loss in systolic blood pressure of only 4 mm. and a loss in diastolic of 7 mm. and an *increase* in pulse rate of eleven beats per minute.

The advantages of this anesthetic are the following:

1. A quick narcosis from which the patient recovers promptly.
2. Ethyl chloride has a pleasant odor and is not irritating to the respiratory mucous membrane.
3. Stage of excitement, if any, is very short.
4. No increase in saliva and bronchial secretions, no cyanosis or venous congestion.
5. The small amount of the drug necessary.

* Presented to the Pacific Coast Association of Anesthetists, May 16, 1922.

6. Readily administered in emergency surgery on account of its portability and where nitrous oxide oxygen apparatus is not available.
7. Vomiting occurs in only a small percentage of cases after anesthesia, and when it does occur, is not prolonged or distressing.
8. It is particularly adaptable to children.
9. May be used for induction to other anesthetics.
10. In *simple* overdose, resuscitation by the usual methods is quickly accomplished owing to the extreme volatility of the drug and its rapid elimination.

The danger signals of ethyl chloride anesthesia appear without warning on account of its quickness in effect and rapid transit into its different stages.

Contra-indications, as follows:

1. It is not suitable for prolonged administration on account of its dangers, expense, and great strain on the anesthetist.
2. It should not be used in alcoholists and neurotics, and is decidedly contra-indicated in mechanical and inflammatory respiratory obstruction; in cardio-vascular degenerations and all conditions giving rise to marked dyspnoea.

Although in 1880 the British Medical Association condemned the use of ethyl chloride as being too dangerous, its use now in England and Scotland is prevalent. In a report of anesthetics given in the Ear, Nose and Throat Department of the Royal Infirmary of Edinburgh, Scotland, for the year 1920, there were over 1200 ethyl chloride anesthesias. This represents double the number of any other anesthetic given in this department. Enthusiastic advocates of this anesthetic are M. W. Ware of New York, A. H. Miller of Rhode Island, Erdman of Brooklyn. Murray, in 1905, reported 150 administrations in infants one year of age; the youngest patients were five to fourteen days old; the larger proportion were from five to seven weeks old. A. H. Miller of Providence, Rhode Island, in 1912, compiled the experiences of twelve anesthetists; in this series there occurred one death in every 13,365 administrations. M. W. Ware of New York, in 1917, reported one death in every 15,000 ethyl chloride anesthesias. In January, 1922, Webster of Winnepeg, Canada, reported 22,000 administrations without a fatality, although the greater number of these were inductions to ether. However, he considers nitrous oxide safer. He uses the closed method, using the Ormsby inhaler and prefers it to the open method. Guedel of Indianapolis uses the Yankauer mask, and places ethyl chloride third in value to nitrous oxide and oxygen and ether, and above chloroform. He reports two thousand cases without a death, fifteen of which were for prolonged anesthesia of fifty-three minutes duration.

(I am greatly indebted to Dr. May Walker of Oakland for her guidance and instructions in my first administrations of ethyl chloride as a general anesthetic in minor surgery.)

INDICATIONS FOR THE ADMINISTRATION OF QUINIDIN IN AURICULAR FIBRILLATION *

By ALBION WALTER HEWLETT, M. D., San Francisco
(From the Department of Medicine, Stanford University.)

In 1918, W. Frey announced that a certain proportion of patients suffering from auricular fibrillation regained a regular heart rhythm after having been treated with quinidin sulphate. This announcement was followed by confirmatory reports from many sources. A review of these reports indicates that certain facts concerning the action of quinidin now seem established. In some patients with auricular fibrillation the drug is clearly indicated, in others its use is not so promising, and in still others it occasionally does positive harm.

The main facts upon which the indications for quinidin rest are as follows:

1. A normal rhythm has been restored in over 50 per cent of the reported cases of auricular fibrillation that have been treated with quinidin.

2. The results obtained have been markedly influenced by the duration of the fibrillation. Where the irregularity had been of very recent onset, the drug usually succeeded; where the irregularity had lasted more than a year, successes were much less common. Of nineteen chronic cases reported by Frey, five became regular. My own experience has been much less favorable; for I have had only two successes where the abnormal rhythm had presumably lasted continuously for a year or more (see Chart 1).

3. Other factors, which apparently influenced the results of quinidin treatment, were cardiac decompensation, cardiac dilatation, and the dose of the drug employed. Cardiac decompensation and cardiac dilatation are said to lessen the chances for recovery of the normal rhythm. Where the normal rhythm has been restored, this has usually occurred with moderate doses of the drug given for two to four days; but in some patients the normal rhythm has become established only after large doses have been given or the treatment has been continued for a week or more. Thus, the percentage of restorations has been somewhat higher when large doses have been given to stubborn cases for a week or more. Neither the patient's age, nor his blood pressure, nor the presence or absence of chronic endocarditis has appeared to influence the results obtained.

4. In the vast majority of patients whose normal rhythms have been restored, the fibrillation has recurred; frequently within a few days, in other cases only after months. Except in paroxysmal types of fibrillation, the persistence of a normal rhythm for nine months or over has been exceptional. Recurrences have frequently been controlled by repeating the treatment; but in some cases the drug, though at first successful, has failed on the second or third recurrence. An important question, not yet decided, is whether such patients should receive the drug continuously with the hope of averting fresh attacks of fibrillation.

5. In most patients, the drug has produced no

* Read before the Section on Medicine of the Medical Society of California, at Yosemite, May 15, 1922.

serious effects. Palpitation and an increased ventricular rate need cause no apprehension, provided the patient's general condition remains satisfactory. Occasionally, compensation has been distinctly impaired by the drug, or syncope has occurred. In a very few cases, death has occurred while quinidin was being given or shortly after it had been discontinued. We are not certain that the drug was responsible for these deaths. It has been suggested that auricular clots may have become loosened by the return of auricular contractions, thus causing emboli. Possibly, also, an impaired compensation or some change in the ventricular rhythm may have contributed to a fatal issue.

6. More or less clinical improvement has usually followed the restoration of a normal rhythm. The subjective discomfort caused by the arrhythmia has usually been lessened. In many cases compensation has been improved; and occasionally it has been practically restored, even where the usual treatment with digitalis had failed.

Bearing the foregoing considerations in mind, we may attempt to formulate the indications for administering quinidin to patients with auricular fibrillation. In every case the possible dangers must be weighed against the probable chances for restoring a regular rhythm, for maintaining this rhythm and for improving the degree of compensation. Furthermore, the treatment itself must be so conducted as to avoid, so far as possible, dangers and accidents.

Beyond doubt, the patients most suitable for treatment with quinidin are those in whom the fibrillation has developed recently and whose hearts have previously been in good compensation. When fibrillation occurs, such patients commonly complain of palpitation, precordial oppression and breathlessness on exertion. If a normal rhythm is not restored after a few days' treatment with rest and sedatives, such patients should always, in my judgment, receive the quinidin treatment. Small doses of the drug usually restore the normal rhythm, and the danger from emboli and other accidents appears to me to be negligible. When the regular rhythm has been re-established, the symptoms usually disappear completely. Finally, in these patients, the heart may remain regular for an indefinite time. After the heart has become regular, such patients should be carefully investigated, in order that focal infections or other causes of cardiac irritation may be determined and removed. It appears to me important that general practitioners should recognize the onset of fibrillation in these patients in order that prompt treatment with quinidin may be given. A failure to do so permits the fibrillation to become more firmly established, so that it is more resistant to treatment. Furthermore, the irregularity itself places a strain on the heart muscle, and in time favors dilatation, hypertrophy, and decompensation.

Where the fibrillation has recently developed in patients with advanced decompensation, quinidin

CHART I.
Sinus Rhythm Restored by Quinidin

Name and Number	Age	Cardiac Diagnosis	B. P.	Decompensation	Enlargement of Heart	Duration	Amount*	Fibrillation Recurred	Remarks
G. F. 84234	67	Arteriosclerosis Myocarditis	218	Marked	Marked	1 year plus	18–105	None in 5 months	
A. B. 91015	35	Chronic endocarditis Lues iii	105	Marked	Marked	Few months	24– 37	None in 3 months	
A. P. R. 96877	33	Chronic endocarditis	122	Very little	None	2½ days	3– 3	Not known	
A. J. 92992	70	Coronary sclerosis Myocarditis	124	Considerable	Considerable	6 months	18– 34	2 days	Died 2 days later
Sch. 81564	38	Chronic endocarditis	114	Marked	Marked	6 months	18– 27	None in 9 months	Digitalis has previously failed
Simp. 92990	78	Myocarditis Coronary sclerosis	150	Marked	Marked	2 weeks	30–100	3 days	Died 3 weeks later
Buc. 104280	58	Myocarditis	130	Moderate	None	2 months	18– 30	12 days	Recurrence was immediately relieved by 3 grains of quinidin
Fol. T. 99479	53	Myocarditis Aortitis	130	Little	Moderate	2 days	3– 6	None in 6 months	Flutter then regular
Cas. 100188		Myocarditis	110	Moderate	Moderate	2 months	18–123	10 days	
Ma.	48	Myocarditis	180	Little or none	Marked	Few weeks or months	36–160	2 days	
H. G.	45	Myocarditis	120	None	None	3 days	12– 18	None in 4 months	
Cla. 104224	50	Myocarditis	110			1 day	9– 9		
Gra. 70678	55	Myocarditis	90	Considerable	Marked	4 days	12– 18	7 days	Recurred in 1 week and then resistant to quinidin
Allum. W. 104397	73	Myocarditis		Moderate	Moderate	Paroxysmal	9	10 days	Has twice become regular since then under quinidin
Ball.	41	Myocarditis	140		Somewhat	About 1 year	18– 21	None in 3 weeks	

*Under amounts, the first figure represents the maximum daily dose and the second figure the total amount received.

has restored the normal rhythm in a considerable proportion of cases. Yet, in my experience, these patients are much less favorable subjects for the treatment than are those in whom compensation had previously been good. Often the restoration of a regular rhythm has caused but little change in the patient's general condition and early relapses have been frequent. In these patients, also, the possible dangers from dislodging auricular thrombi, from decompensation and from changes in the ventricular rhythm must be taken into consideration. Despite these objections, I believe that the drug should be given to such patients, unless decompensation is extreme. If a normal rhythm is restored and the auricular fibrillation later recurs, further action must be guided by the effect which one may say in a general way that patients with marked decompensation, greatly enlarged hearts, or evidence of coronary diseases are relatively unfavorable subjects. In chronic fibrillation, then, quinidin has been, on the whole, rather disappointing as a therapeutic measure; yet the occasional brilliant success raises the hope that better results will be obtained when more is known of the drug and of the type of chronic case most suitable for treatment.

In giving quinidin, certain general precautions should be observed. The patient should be kept in bed, preferably under the supervision of a nurse. If there has been cardiac decompensation, this should be improved by a preliminary rest. Some authors recommend that digitalis be not given with the quinidin. One should begin the

CHART II.
Quinidin Produced no Change in Rhythm.

Name and Number	Sex	Age	Cardiac Diagnosis	B. P.	Decompensation	Enlargement of Heart	Duration	Amount
P. C. W. 93891	M	62	Myocarditis Angina pectoris	170	Marked	Marked	1 year plus	30–
C. H. 97100	F	52	Myocarditis Chronic endocarditis	165	Considerable	Moderate	2 years	18–100
Ste. 83985	F	64	Arteriosclerosis Myocarditis	160	Marked	Marked	1½ years	30–160
Glei. 86117	F	37	Chronic endocarditis Myocarditis	120	Considerable	Considerable	1 year	24–
L. K. 58443	F	61	Arteriosclerosis Myocarditis	200	Moderate	Slight	6 weeks	36–147
J. M.	M	50	Myocarditis		Moderate		2 years plus	24–
Sch. 99199	M	63	Arteriosclerosis Myocarditis	190	Marked	Marked	2 years	66–300
Dol. 100196	M	62	Myocarditis		Considerable	Marked	½ year	24–200
Sha. 93608	M	70	Myocarditis	118	None	Slight	20 years	18–180
Rus. 100711	M	54	Myocarditis				8 months	24–142
Og. 98431	M	53	Chronic endocarditis Myocarditis	90	Marked	Marked	18 months	18–117
Ta. 98801	F	49	Chronic endocarditis	124	Marked	Marked	For years	24–114
Car.	M	44	Myocarditis	100	Little	Little	2½ months	18– 75
Bal.	F	40	Chronic endocarditis	140	Moderate	Very marked	Over a year	30–150
Emp. 91644	M	71	Arteriosclerosis Myocarditis	140	None	None		18– 72
Aber. 104365	F	56	Myocarditis	260	Moderate	Marked	6 months	18– 63

the change of rhythm had upon the patient's general condition.

The longer fibrillation has lasted, the poorer, on the average, are the chances for recovering a normal rhythm when quinidin is given. Nevertheless, some patients recover the normal rhythm, even though fibrillation has persisted for months or years, and occasionally a brilliant clinical result has been obtained where other treatment has practically failed. In general, however, the large number of failures in these chronic cases and the marked tendency to early recurrence among the successes, causes one to hesitate about using a drug that appears to be not entirely free of danger. At present, unfortunately, we have no certain method for selecting patients in this group who are most apt to be benefited by the drug; although quinidin sulphate administration with a small dose of three grains on the first day, and then rapidly increase to a maximum of from eighteen to thirty grains daily. If no unfavorable symptoms supervene, the latter should be continued for about a week. Should the rhythm become regular, the drug is best stopped altogether. If the irregularity recurs, and if the clinical improvement during the period of regular heart action has warranted further trial, then the drug should be given again, and if the pulse again becomes regular, the quinidin may be continued in small doses with the hope that it may prevent further relapses.

Unfortunately, we have no certain means of predicting what patients may do badly while taking the drug, and alarming symptoms have occurred, without warning, even after small doses.

For this reason it is necessary to proceed carefully in every case.

CONCLUSIONS

1. When auricular fibrillation occurs in a heart that has previously been in good compensation, quinidin should always be given; provided several days' treatment with rest and sedatives has failed to restore a normal rhythm.

2. When auricular fibrillation occurs in a heart already decompensated, quinidin should be given a trial, provided the decompensation is not very serious. The results in this group of patients are not very satisfactory; not so much because the drug fails to restore the regular rhythm, but because relapses are common and the general condition may not be altered materially by the change in rhythm.

3. When fibrillation has persisted for over a year, the results of quinidin treatment are not particularly encouraging. The proportion of patients who recover a normal rhythm is not great, and many of these relapse after a short time. Furthermore, the dangers from the drug are probably greater in these patients.

4. Nevertheless, occasional patients with long standing auricular fibrillation have shown a remarkable improvement after receiving quinidin, even when other forms of treatment have been relatively ineffective. At present we are not able to predict what cases will thus be favorably affected.

Clinics or Dispensaries and Free Medicine—The report of the Council on Medical Education and Hositals of the A. M. A. (Journal A. M. A., August 5) on clinics and dispensaries furnishes some important data and indicates some rather startling tendencies in medicine. It is apparently conservatively estimated that some eight million persons or about 7 per cent of the entire population of the United States made over twenty-nine million visits to dispensaries during last year. Some of the main facts brought out by the Council in this difficult survey are:

1. There is a steady increase in the number of patients seeking treatment in general dispensaries.
2. There has been an unprecedented increase since the war in the number of special clinics and dispensaries, such as those for tuberculosis, venereal disease, mental hygiene and child hygiene.
3. There is great need for individualized study and treatment of dispensary patients, to counteract what seems to be a prevailing tendency to routinization.
4. There is need of a closer bond between the out-patient service and the other service of hospitals, and this will best be met by having the hospital and the out-patient staffs identical and by keeping unified records.
5. In the matter of finances there is an increasing tendency to charge nominal fees, thereby placing part of the cost of an institution on the patient.
6. A general increase is noted in the use of social service workers to see that patients continue their treatment, and to investigate their social and financial status so as to prevent pauperizing.
7. The difficulty of securing satisfactory data is increased by the inadequacy of clinical and office record systems in a large number of institutions.
8. There is a great and increasing amount of educational work, especially the teachings of interns, medical students, graduates, and pupil nurses.

UNDERLYING PRINCIPLES OF PLASTIC SURGERY*

By JOSEPH A. PETTIT, M. D., Portland, Oregon

The underlying principles of plastic surgery vary with the region of the body in which the procedure is being carried out, and also in reference to the tissues that are being handled. There are certain general principles, however, which apply in varying degrees to all plastic surgical procedures. Certain basic principles are more or less essential to a successful technique in the reconstruction work of any part of the body. In dealing with these principles they may be classified under certain general headings.

1. *Blood Supply:* In the reconstruction of parts, and in securing flaps to fill in defects, great care should be exercised to conserve the blood supply of the transposed tissues. In the selection of the flaps of tissue to be utilized in plastic work two thoughts should be foremost in mind. First, to secure a flap of tissue which is adequate not only to fill in the defect, but to provide for loss of size by a certain amount of contraction; and, second, the flap of tissue selected must have a base that carries blood supply to all parts of the flap adequate for the preservation of its existence. If the base of the flap can be left in that direction from which the nutrient blood vessels naturally come, the security of its integrity is greatly enhanced. That is to say, providing the pedicle of the flap can be so placed as to carry the largest blood vessel which goes to the particular tissue to be transposed, greater assurance is provided for a maximum nutrition than if the pedicle is located where some of the smaller nutrient vessels enter. The base of the flap should be as broad, if not broader, than the greatest width of the flap. If the pedicle can be so located as to carry a large nutrient vessel, the base of the flap can, with safety, be made of less breadth than the transposed flap. Undue torsion of the base of the flap is apt to produce a partial constriction of the lumen of the nourishing vessels and thereby endanger the life of the flap. Undue tension on the pedicle may produce a similar unfortunate result.

2. *Coaptation:* In the placing of plastic flaps, minute attention to the details of accurate coaptation is of considerable importance. The recognized principle of the accurate apposition of the fractured ends of bones to secure solid union applies to plastic flaps as well. In order to secure a good, an expeditious, and a lasting union of any type of soft tissue, it is important that similar tissues contact, and at the same time contact with precision. Fascia should be sewed to fascia, periosteum to periosteum, mucous membrane to mucous membrane, and skin to skin. The mesoblastic tissues can be overlapped and will adhere firmly in a double layer. In dealing with the epiblastic tissues it is necessary to avoid overlapping and to accurately coaptate the cut edges, The fibrous tissue cells will unite together irre-

* Read before the Section on Surgery of the Medical Society of California at Yosemite National Park, May 15, 1922.

spective of position, but the epiblastic cells will not unite unless brought together at their sides or bases. The sutures used in coaptation of the flap edges must be tight enough to maintain a continuous and perfect contact, and at the same time not so tight as to produce a pressure necrosis, with the resulting local irritation, tendency to infection, and a possible cutting through of the sutures.

3. *Plastic Flaps:* The advantage demonstrated in bone surgery of securing a graft containing all of the bone elements, namely, periosteum, osteum and endosteum, is recognized. The integ-

Fig. 1
Incorrect selection of flaps to preserve vascularity. (Diagrammatic)

rity of plastic flaps is enhanced by applying this same principle. A plastic flap on the soft tissues should, if possible, include all the essential tissues of the part. The plastic flap of the cleft palate should include the periosteum on one side and the mucous membrane on the other side with the intermediate tissues undisturbed. The flaps should be a little larger than the places to be filled, in order to compensate for a certain degree of contraction, as well as to prevent traction upon the coaptation sutures. The base of the flap should be as wide as the greatest breadth of the flap. Whenever possible the base of the flap should also be of greater thickness than the remainder of the flap. An adequate pedicle is the best insurance available for the life of the flap.

4. *Tension:* If any degree of tension is permitted to occur in the placing of a plastic flap one can feel a reasonable assurance of failure. A tension endangers, first, the suture line; second, the blood supply of the flap; and third, its growth in the new situation. Coaptation sutures will invariably cut through by pressure necrosis whenever tension exists. Even a very moderate degree of tension constitutes a positive danger to

Fig. 2
Proper selection of flaps to preserve vascularity. (Diagrammatic)

the integrity of the suture line. Before placing any coaptation sutures on any plastic flap, all tension should be sufficiently relieved so that the plastic flap will not only lie freely in its new situation, but will even nestle up to the edges to which it is to be sutured. Tension endangers the nutrition of the flap in two ways, first, by the stretching of the vessels, and second, by a possible torsion, either one of which makes a constriction of the lumen of the vessels. It is extremely important that the flap be well nourished during the early days of its incorporation in the new situation. At this time the new vessels have not grown into the flap as it lies in its new situation from the tissues to which it is united, and its only source of blood supply is through the vessels in the pedicle. The periphery of the flap will secure new blood supply in its new location much quicker if the local nutrition is very good.

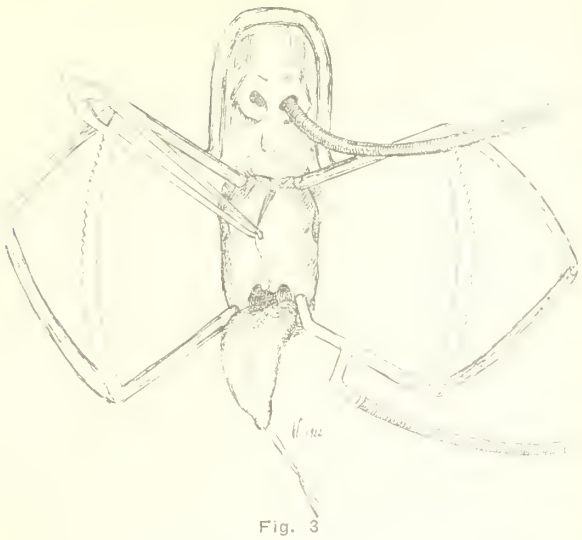


Fig. 3
Adequate loosening of flaps to permit overlapping

The cohesion of the plastic flap in this new situation begins at once. Nature's "cementing" process sets in promptly and gradually becomes firm. If tension exists the flap will slide a little after a few days and this will occasion a loss of all the efforts of the first few days of the "cementing" process, and the whole process will have to be started over again, if it is fortunate enough to start again. Therefore, there occurs an unfortunate delay in the growth of the flap in its new situation, even if it does occur at all.

5. *Immobility:* Plastic surgery receives another lesson from bone surgery in considering the importance of immobility. Providing the dangers resulting from tension are obviated, it is also necessary that no other influence be permitted to disturb the flap during its implantation to the new situation. Immobility may be caused by pressure or traction of other parts. Muscle pull exerts a fatal influence to union. This is especially true in suture of the clefts of the soft palate. The fate of a soft palate suture entrusted to the security of the ordinary coaptation sutures is in constant danger. Every act of swallowing, talking or crying on the part of the child means a contraction of the palatoglossal and palato pharyngeal muscles. Each contraction of these muscles makes a definite and distinct pull on the suture line of the median raphe of the soft palate. This pull means a traction on the coaptation sutures with the resulting danger that they cut through. No soft palate suture may be considered safe without the use of the lateral lead plate splints and silver wire, as shown in the illustrations. The broad surface of the lead plates take up the traction of the muscles and if they are drawn up snugly enough, no motion of the pharynx and tongue will produce any traction upon the coaptation suture line.

6. *Suture Materials:* Horse hair has two distinct advantages. First, elasticity, and second, absence of capillary attraction. During the early stages of any healing process there is a mild congestive swelling of the coaptating tissues. A suture which is non-elastic will produce local irritation. Horse hair has just enough elasticity to compensate for this moderate degree of swelling, and when the swelling disappears will draw down and maintain an accurate coaptation. The absence of this "coaptation traction" eliminates one of the possibilities of infection being carried into the deeper tissues. The pressure necrosis of a cutting suture constitutes a possible local infection focus. If there exists the danger of a slight degree of tension the sutures can be applied as a figure eight suture, giving an accurate coaptation, and at the same time a reinforcement. It is probable that the figure eight suture should be used more often than it is, especially in plastic surgery of the palate.

7. *Time:* The time required for the union of plastic flaps varies. The type of tissue involved in the plastic work as well as its vascularity governs the time required for union. The plastic transplant whose pedicle is to be cut off requires a little more time and consideration than the flap with a pedicle that is permanent. A small flap will gain an adequate circulation somewhat earlier than a large flap. In addition a flap which has a large and thick pedicle carrying a proficient blood supply can be cut loose somewhat sooner. Some tissues are more vascular than others and the length of time required for a solid implantation of the plastic flap is less in tissues which normally have a maximum degree of vascularity. The kind of tissue transplanted also governs the length of time required for permanent implantation in the new situation. As a rule the epiblastic structures unite more rapidly than the mesoblastic. A longer length of time must elapse before entrusting fas-

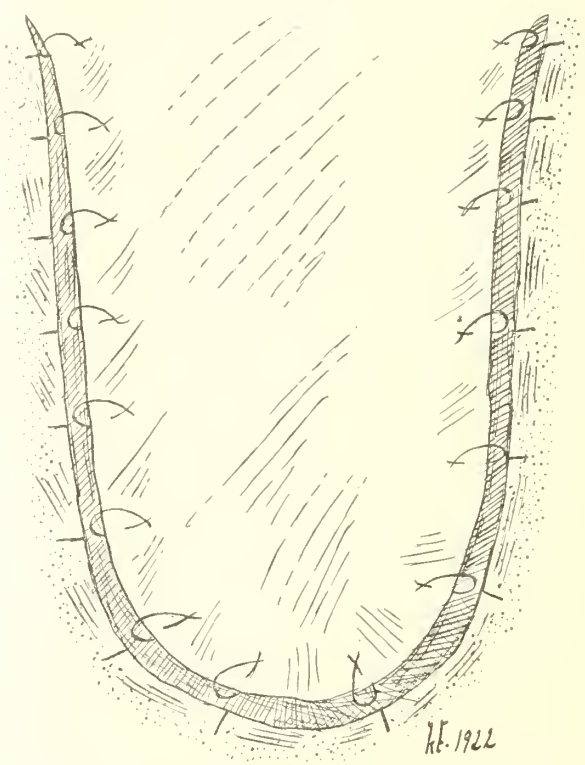


Fig. 4
Stitches may loosen by pressure necrosis when tension exists

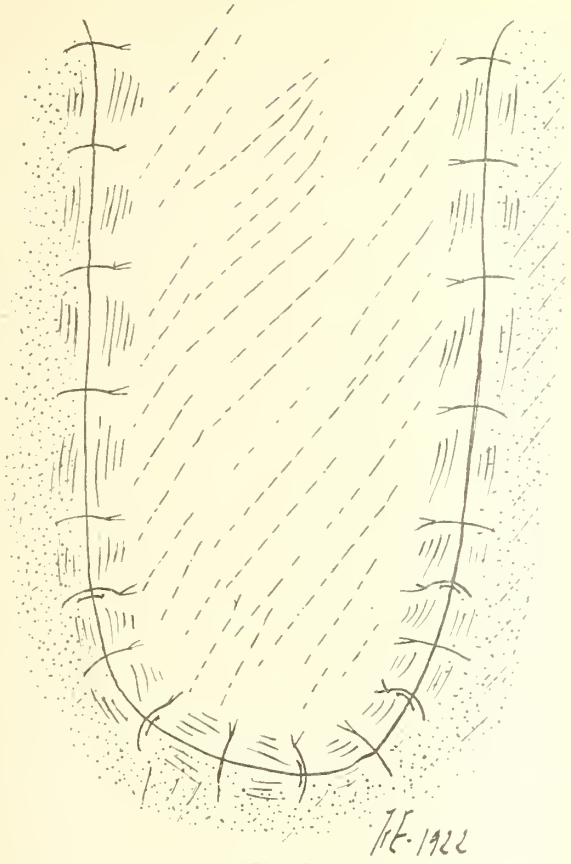


Fig. 5
Undermining adjacent tissues helps to obviate tension on sutures

cial tissues to resume a normal function than mucous membrane. Likewise in osseous plastic work the maximum length of time is required before the new union can be entrusted with any strain. The osteoblasts slowly perform their physiological function in bone repair and union.

8. *Asepsis:* Asepsis should be maximum, considering the environment of the operative field. While plastic work on bones requires surgical technique as immaculate as abdominal work in order to ensure success, plastic work in the oral cavity must be done under conditions that can be rendered only relatively aseptic. In the latter situation we find primary union not difficult to obtain under environments which would prohibit success of an osteoplastic procedure. The bacteriological

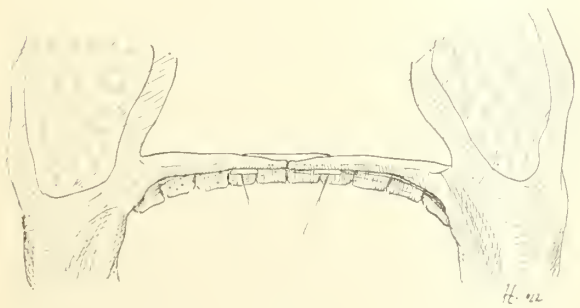


Fig. 6
Muscle pull counteracted and immobility established by lead plate splints

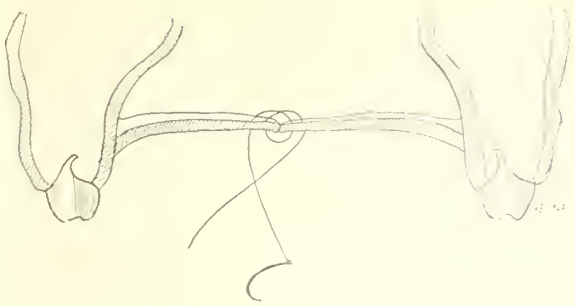


Fig. 7
Figure of eight suture gives both coaptation and retention

explanations of this fact are accepted with credence, if not by proof. It seems important, however, to strive to attain in plastic work the maximum degree of asepsis which is possible under existing environments.

Of Interest to the Thoughtful—As can be testified by the educational committee of the A. M. A. no little trouble has been experienced in making those in control of the Rockefeller Foundation understand the attitude of the medical profession toward medical education and function which medical men should have. Any controversies that have arisen have been due largely to the fact that the Rockefeller Foundation is dominated by a lay element which either cannot or will not consider medical problems in a professional way. Just now the Michigan medical men are up in arms concerning the proposal of the Rockefeller Foundation to establish a separate independent profession no longer subservient to the medical profession. The graduates from this school are to be classed as "super-nurses," and their activities are to be directed along the lines of preventive medicine, health clinics, prenatal clinics and public health work, with, as they state, the home as their field of activity. These activities they will engage in without the aid, advice or direction of doctor or the profession. Such a move would deprive nursing education of its most important contact with those whose years of experience qualify them to care for the sick. It also would deprive them of the training and contact which is absolutely necessary for the best results if the patient, the one most concerned, is to be benefited by the enterprise. As understood by some of the medical men of Michigan, the plan as proposed would have a tendency to make the nurses superior to the physician who is responsible for the treatment of the patient, and the views of the medical profession would have no weight in the training of nurses. It remains to be seen whether the University of Michigan, which has been flirting with various schemes that seem to be antagonistic to the highest type of medical education and practice will "fall" for the plan offered by the Rockefeller Foundation. Perhaps the million-dollar fund which accompanies the offer will have a determining voice in the matter.—Indiana Medical Journal, September 15, 1922.

Reduced Price of Radium—We offer you, for prompt acceptance, radium in tubes at $70 per milligram, delivery within sixty days from date of sale, and payment to be made upon receipt by your bank. The price includes certification by the United States Bureau of Standards, and all neeessary screens and appliances for proper therapeutic use.—Radium Chemical Company, Pittsburg, Pa.

TREATMENT OF ACTIVE LUES *

By HARRY E. ALDERSON, M. D., and
GEORGE H. BECKER, M. D.
(From the Department of Dermatology and Syphilology, Stanford University Medical School, San Francisco)

During the year 1921 we have studied approximately 500 cases of syphilis, which represents about one-third of the total attendance at the skin clinic.

We are comparing the results of various methods of treatment and expect in another year to have sufficient data from which to make instructive comparisons and draw important conclusions as to therepeutics. H. C. Coe recently made a survey of the luetics treated between 1912 and 1918. A similar study of the period from 1918 to 1922 will soon be completed. The first survey showed that less than 12 per cent of the patients remained under treatment and observation for one year or more. Of these only 19 per cent have been apparently cured. Actual cure will be determined only by long years of observation and repeated blood and spinal fluid examinations. These 19 per cent, however, showed negative serological and clinical findings repeatedly *two years* after treatment was suspended—13 per cent of the 12 per cent have remained *Wassermann fast* but *clinically well.* The disorganization of our social service staff as well as the unusual labor conditions incident to the war has interfered somewhat with the completeness of our data. The report of the past four years' work will be much more complete. The difficulties encountered in obtaining the cooperation of the patients is similar to that elsewhere and always interferes with the accuracy and completeness of records.

In this preliminary paper our hope is to stimulate a general discussion of the subject and to emphasize the fact that antiluetic treatment should not and *can not be standardized.* Not only do patients themselves present variable factors, but the treponema pallidum is believed by some to vary in its resistance to the action of drugs.

The treatment of lues *must be individualized*—the best results are expected to follow and almost invariably *do* follow, energetic arsphenamine-mercury treatment administered during the earliest stages of the disease before the Wassermann reaction has become influenced. The intensiveness of our treatment must, of course, be regulated by the condition of the patient, who may present some constitutional disease. Heart and kidney complications always call for a less energetic procedure. The effects of the drugs upon the different viscera must be remembered. The cumulative possibilities and the slowness of elimination, particularly in the late cases, as recent work has shown, should serve as a warning in our anxiety to "push" the treatment. Wile, whose recent paper before the Academy many of you heard, pointed out the danger of producing too rapid involution of visceral lesions, particularly the liver and aorta, by intensive arsphenamine therapy. Others have warned against the danger of small ineffective doses producing arsenic resistant strains of treponemata.

We are carrying out the following general plan, being very careful to individualize in each case so far as is possible.

Every patient upon admission is given a complete physical examination and in addition the routine laboratory tests, such as blood count, Wassermann and urinalysis are made. During the course of treatment the Wassermann and urine tests are repeated at regular intervals and bearing in mind the possibility of early invasion of the cardio-vascular and central nervous systems physical examinations are repeated at frequent intervals.

The drugs used in the treatment of syphilis have been more or less fundamental, with various minor modifications in the manner of administration and some chemical changes. Of the various methods of administering mercury we now prefer the inunctions. Of the arsenicals, arsphenamine is, we believe, still the choice. Upon the introduction of silver salvarsan we ran a small series of cases (fifty injections), but were unable to find any superiority of this article over the older preparations. We now use neoarsphenamine as a substitute for arsphenamine only when necessary and then in average dosage of 0.9 gm. for men and 0.6 gm. for women.

For therapeutic purposes we use the American Dermatological Association's classification of "early" and "late" lues. The former includes those cases showing an initial lesion, positive "dark field" findings with or without a positive Wassermann reaction—also those cases with constitutional manifestations showing that the infection has become generalized. The physical signs and Wassermann in these cases are usually positive. The late cases include those showing clinical or serological evidence of a luetic infection, usually of at least one year's duration. Here the treponemata tend to become localized in various organs and tissues.

The early cases receive arsphenamine-mercury treatment consisting of six intravenous injections of arsphenamine at weekly intervals (men 0.6 gm., and women 0.4 gm.). For the patients who are working, or who for other reasons can not stay in the hospital over night, we use neoarsphenamine, which rarely causes any interference with their occupation. The usual intravenous precautions are practiced and distilled water is used as a diluent, each dose being dissolved in 30 cc. of water. Reactions are practically unknown. Along with the intravenous therapy-mercury is also prescribed—preferably as inunctions in a course of thirty daily rubs (using 4.0 for men and 2.0 for women). A sheet of printed instructions accompanies this prescription explaining in detail the exact method to be followed, favorable sites to be used and the early signs of mercurialism. The use of benzine for cleansing as suggested by Cole removes one of the most disagreeable features connected with rubs, but here we insist very strongly upon the rub being continued for one-half hour or more. The official Unguentum Hydrargyri (50 per cent) is prescribed in flexible capsules. At times, the biniodide of mercury is prescribed in solution (dose gr. 1-15) and rarely produces gastric symptoms. With it, we give the iodides in the usual form in a *separate solution.* Following

* Presented to the San Francisco County Medical Society.

one course of arsphenamine-mercury as above outlined, it is customary to give a rest period of three weeks, after which a blood Wassermann test is made. If negative, another course of mercury is given, while if positive the entire arsphenamine-mercury series is repeated. The late cases also receive six weekly injections of arsphenamine accompanied by mercury, the latter being frequently given in solution as biniodide. Iodides are administered as indicated, the potassium salt being preferred, prescribed as a saturated solution. All cases having a negative blood Wassermann taken at three months, six months, one year and two years, *after thorough and complete* courses of treatment, accompanied by a negative spinal fluid and free of clinical signs are tentatively classed as "cured," but are instructed to report semi-annually for observation. This criterion of a "cure" we have rather arbitrarily adopted and feel that it is perhaps too rigid, but one under which we can conscientiously sanction marriage. Even then, we advocate further medication yearly for several years, depending upon the case and conditions. The provocative Wassermann is too uncertain to be of value, as shown in a recent thesis by Ruth Shepardson of our clinic. The luetin tests also are worthless, as shown by Alderson's work with commercial luetin.

The ideal treatment of syphilis has not yet been found. Some prefer the old salvarsan, some the neoarsphenamine and others the later and newer preparations. Mercury is used as rubs by some and by mouth or by injection by others. Regardless of the individual choice *we do know* that the infection *must be seen early and vigorously and persistently treated with all the means* at our disposal for a prolonged time, if we hope to get a permanent cure. Even then, it will take years to determine a definite cure.

Medicine a Service—Medicine is a profession of service and not a commercial venture; any attempt to make it so will end in discredit and usually failure. True, we must live by our work, but in my life I have never seen the man who works for the joy of it, go hungry or his children begging for bread. It is the law of life that he who gives most gets most, and the men who give most are usually the men who are accomplishing most in every walk of life. I have often thought if the young men in medicine knew the joy of God's open country, more of them would be country doctors.—Kay in American Medical Press, September, 1922.

"Each State hospital owes to its patients complete medical service," says Mr. A. L. Bowen in an article in The Modern Hospital. "A State hospital medical service to be complete must be prepared to give each patient, both on his arrival and at frequent intervals during his stay, every possible advantage that he could get in the very best private general hospital; everything, indeed, that will help to place him in first-class condition physically, and to adjust himself mentally to his environment, so that he may resume within his limitations the pursuit of occupation, recreation, and the pleasures of life. These privileges will render his stay in the institution serviceable to it and to himself."—The Modern Hospital, August, 1922.

THE DIFFERENTIAL PUPILLOSCOPE *

By OTTO BARKAN, M. D., San Francisco

Some ten years ago, during his attempts to determine the absence or presence of color vision in animals, C. Hess devised an instrument which gave a quantitative measure of the sensibility of the pupillary reaction.

In subsequent years the clinical significance of the method became apparent and it was adapted to clinical use. Inasmuch as it gives us a norm for the light reaction of the pupil, is free from all sources of error, is independent of the state of adaptation and age of the individual, it has become of considerable diagnostic aid in clinical medicine as well as in the restricted field of ophthalmology. The method was published two years ago. From my own experience I do not doubt that in the course of the next few years it will become a necessary adjunct to every well-equipped institution and also, even if to a more limited extent, in the dark-room of the specialist.

The underlying principle of the method, though simple in itself, is so unfamiliar to our modes of thought that it is at first not easy of conception. For its detailed description the reader is referred to the original articles. Let it suffice to state that with this instrument we measure the reactivity of the pupil by determining quantitatively the least difference of light intensity which is necessary to produce a reaction. It has been found that physiologically the pupil does not react to a difference of light which is less than 95 to 100. When the difference of light is greater than this the pupil responds with contraction upon appearance of the brighter light. The difference of light intensity necessary to just cause a reaction is thus a measure of the sensibility of the pupillary reaction and therewith of the reflex arc entailed. The importance of the determination of such a norm immediately becomes apparent. It is not influenced by opacities of the media, such as cataract, nor by refractive errors. Nor does the pupillary play interfere in practice with the examination.

The nature and localization of fundus lesions which may affect the reaction have been worked out. Thus it has been found, and this is in harmony with other recent researches, that lesions of the macular region only affect the pupillary reaction. Thus, also it has been found that primary optic atrophy does not affect the reactivity until vision is diminished to 3-10 and that from this point on the two proceed pari passu.

The patient's subjective sensibility to difference of light can also be measured, and it has been found that so long as the light differences are sufficient to cause the pupil to react, the individual can also discriminate between them subjectively and vice versa. Lack of harmony between the two is found only in ocular hysteria, simulation and cortical amblyopia. Each of these again can be differentiated. Because of the above diagnostic possibilities and the fact that, since we can numerically measure, not only the direct, but also the consensual reaction, we are in a position in many

* Read before the Section on Eye, Ear, Nose and Throat of the Medical Society of California at Yosemite National Park, May 16, 1922.

cases to localize obstructions or lesions in the different parts of the reflex arc. It is for this reason that the instrument is called the "Differential Pupilloscope." In addition it enables us to positively diagnose a "sluggish reaction" before this becomes apparent by our best clinical methods. On the other hand, in a series of 108 neurological cases, which are reported elsewhere by Dr. Mehrtens and the author, twelve cases which had clinically been diagnosed as Argyll-Robertson pupils, because of their sluggish reactions, were proved by the pupilloscope to be normal. This discrepancy between our clinical and pupilloscopic examinations is accounted for by the fact that the former are based on the arc, the amplitude, speed, etc., of the reaction. These factors obviously vary, not only according to the judgment of the individual observer, but also in themselves inasmuch as they are influenced by the structure of the iris. Thus the senile iris and sphincter are stiffer than a young one; a brown iris stiffer than a blue one. These factors do not, however, affect the reactivity as tested by our method. It is true, on the other hand, that the results obtained with the instrument require an exact ocular examination and considerable personal experience on the part of the observer.

In practice I have found the method of particular value in the following:

1. Deformed pupils, if pathological, show diminution of reactivity of part or of the whole sphincter.
2. Anisokoria. If due to pathological lesion, the reactivity is affected. In congenital cases it is normal.
3. Early diagnosis of Argyll-Robertson as well as other pupillary lesions such as iridoplegia and ophthalmoplegia interna.
4. Definite diagnosis of Argyll-Robertson pupil in presence of optic atrophy, opacities of the media, or even of synechae, so long as in the latter case a portion of the pupil is not mechanically impeded in its freedom of movement.

The value of the above is evident to any one familiar with the significance of pupillary lesions. It is a matter of general knowledge that the true Argyll-Robertson pupil (reflex iridoplegia) occurs only in neuro-syphilis. It is often isolated and may precede by many years all other signs of the disease. At the present time it is of interest to note that in encephalitis lethargica the Argyll-Robertson pupil does not occur, whereas ophthalmoplegia interna is frequent.

Lay Control of Medicine—Lay control and dictation of the management of the institutions in which medical men are interested directly or indirectly is bound to come unless something is done to prevent it. Not alone this, but lay control of everything pertaining to the practice of medicine eventually will come unless the spineless doctors who fail to see the growing tendency of the times awaken to the danger and put on their fighting clothes in an attempt to save a reasonable amount of independence for themselves. This is no idle dream, and those who think differently will have occasion to learn the truth perhaps when it is too late.—Indiana Medical Journal, September 15, 1922.

INTRA VITAM BONE MARROW PUNCTURE IN PERNICIOUS ANEMIA*

By ERNEST H. FALCONER, M. D., San Francisco and LAIRD M. MORRIS, M. D., San Francisco

Laird M. Morris has devised a small drill, carrying an outer casing and driven by a dental engine, the drill being attached to the dental engine in the same manner as an ordinary dental drill. This drill will readily penetrate the cortex of the long bones. When this is accomplished the drill proper, marked in the illustration (B) is withdrawn from the puncture wound, leaving the casing (C) in situ. Through this casing a sample of the marrow is reamed out with the screw-like instrument marked (A).

TECHNIQUE OF OPERATION

In our experiments we have always selected the tibia for the purpose of puncture on account of its accessibility. The site usually chosen is about the juncture of the middle and upper third. The skin over this area is carefully sterilized with tincture of iodine and alcohol, and 2 per cent novocain used to accomplish local anaesthesia both of skin and underlying periosteum. The skin incision need not be over 1 cm. in length, being careful to divide the periosteum underneath. Only moderate pressure is used to force the drill down as it is penetrating the cortex of the bone. As it works its way down through the bone the drill usually becomes heated and cauterizes the puncture. The technique concerning a sterile field and asepsis should be impeccable. As soon as the cortex is pierced and the drill removed with the casing in situ, the small screw-like instrument is carefully passed down the casing to the marrow. After several turns it is lifted out and the marrow smeared on sterile cover slips attempting to secure a thin, uniform distribution on the cover slip. These smears are dropped into absolute methyl alcohol for fixation and are stained with the May-Grünwald stain, counterstained with Giesma's stain for good cell differentiation. Wright's stain may be used, but does not seem to be quite as satisfactory as the above method.

INTREPRETATION OF BONE MARROW SMEARS

After one has secured a bone marrow smear and prepared it the interpretation of the specimen is fraught with considerable difficulty. It will be evident to any one familiar with blood work that several smears must be studied. In the leukemias the marrow smears are not so difficult to interpret as the marrow is very cellular and the type of cell is suggestive of the condition. In pernicious anemia the interpretation is far more difficult and a discussion of this problem involves a consideration of the accepted ideas of bone marrow pathology in this disease. The viewpoint put forward by Ehrlich in 1898 that pernicious anemia is a primary disease of the bone marrow, a "megaloblastic degeneration," i. e., a degenerative change in which the marrow reverts to its embryonic type of red cell production, has not been fully supported by clinical observation and experimental evidence.

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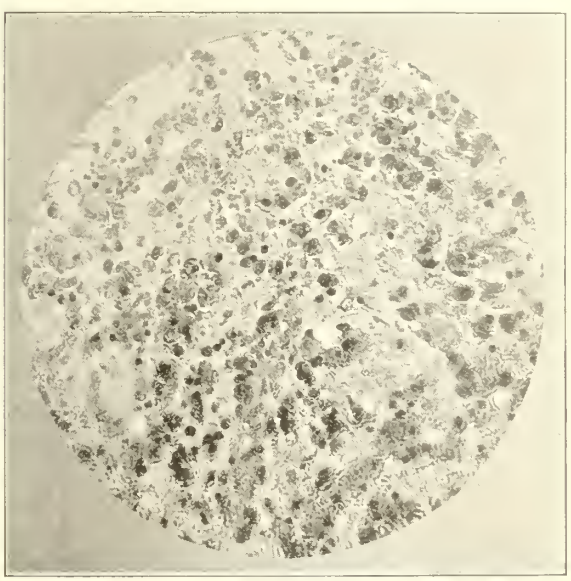
* Read before the Section on General Medicine of the Medical Society of California at Yosemite National Park, May 16, 1922.

Megaloblasts and macrocytes have been found in the blood and in the marrow in other conditions, i. e., other types of anemia and the condition has been reproduced experimentally in animals by Bunting, with hemolytic toxins; for example, ricin. It would appear, therefore, that the changes in the marrow in pernicious anemia are secondary and represent an effort to compensate blood destruction rather than the marrow being the primary site of a disease which is characterized by faulty blood regeneration. If marrow changes are secondary and represent "broken compensation" from overwork how will the marrow in progressive pernicious anemia differ from that of other severe anemias. As a matter of fact the widely prevalent idea that the marrow in this disease is always a red marrow is very probably incorrect. Also there are undoubtedly severe chronic anemias where the marrow, at first very active, later becomes exhausted, and is indistinguishable from that found in pernicious anemia. The degree of hemolysis

Cut 1
This marrow smear is diluted with normal Saline solution and cells are sparsely distributed



Cut 2
Microtome section of marrow from patient where splenectomy was performed

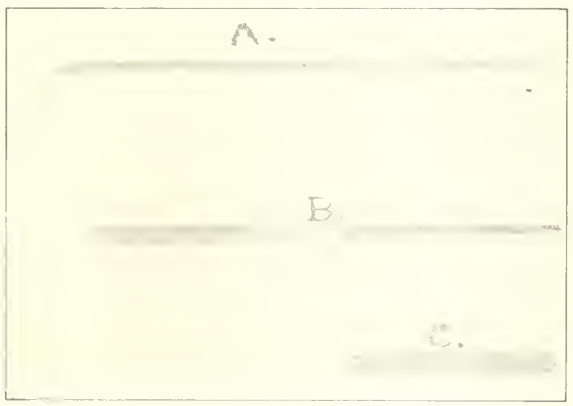
probably determines to some extent the formation of red marrow in pernicious anemia. For example, there is a type of case called attention to by Minot in Oxford Medicine where the disease comes on late in life and the toxic manifestations are chiefly apparent in the nervous system as a postero-lateral sclerosis of the spinal cord. Following is a brief synopsis of such a case. F. C., a male, entered the University of California Hospital first in 1918 aet. 59. Complaints: Weakness, numbness and tingling of hands and feet, diarrhoea, dizziness and "creepy" sensations. Examination showed: Tongue red, smooth; abdomen, slightly distended and sensitive to palpation; superficial reflexes exaggerated, especially knee jerks; gait, ataxic and spastic; Rhomberg present; Wassermann negative; spinal fluid negative. Gastric analysis showed no free HCL. Stool examination negative for parasites. Duodenal contents showed no urobilinogen; urobilin present in four dilutions, giving 800. Hbg. 45 per cent; red cells 2,100,000; white cells 7200; differential polymorphs 71; lymphocytes 24; eosinophyles 5 per cent.

Since this admission date the patient has entered the University of California Hospital four times, each time apparently in a relapse. After rest in bed in the hospital with one or two transfusions his red cells and hemoglobin rise, his symptoms improve and he leaves the hospital. On his last entry, November, 1921, marrow puncture was performed, and while his marrow was not definitely yellow, it certainly was not cellular. We have examined the marrow of three other cases almost identical in type with the above case and the marrow in each case was not cellular and did not impress us as being an active marrow. It would seem in these cases as if blood destruction is never very marked, nor on the other hand, is marrow activity, especially of the long bones, ever very marked. The toxins that cause the combined sclerosis of the cord depress the marrow activity and we get a sluggish marrow. According to Minot in Oxford Medicine, these cases die of their cord changes, rather than their anemia.

Contrast this type of case with the following case: H. B., a male aet. 46, dates his symptoms back to August, 1920, when he noted a yellowish tint to his skin. He also noted dyspnoea, palpitation weakness. During October, 1920, he became so weak that he could not walk so he entered the San Francisco Hospital. In one month he was discharged much improved and he returned to rather hard physical labor. He remained well up to April, 1921, when he again ceased work on account of weakness. On May 27, 1921, he again entered the San Francisco Hospital. At this time he complained of yellow color of skin, weakness, numbness and tingling of hands and feet, abdominal pains and distension, sore mouth and tongue. Examination showed a weak, apathetic man with lemon yellow tint to skin. Tongue smooth and red. A blowing systolic murmur over apex and base of heart; spleen and liver edge

palpable; patellars hyperactive. Urine shows urobilin present. Gastric contents show no free HCL. Stool examination negative for intestinal parasites. Wassermann negative. Blood examination: hbg. 20; red cells 864,000; white cells 2000; differential polymorphs 60; small mononuclears 25; large mononuclears 15 per cent; Smear shows macrocytes, microcytes, poikilocytes, a few normoblasts. Reticulated red cells 4 per cent. Fragility of the corpuscles .45-.38. Shortly after entering hospital a marrow puncture was performed showing a red marrow, very cellular, with evidence of activity—see cut of bone marrow smear No. 1. Many of the cells showed mitotic figures and also what we considered might be direct division by splitting up of nuclei. This patient left the hospital in July after two transfusions feeling very well. He returned to rather heavy physical labor. Shortly after leaving the hospital he was married.

We have performed marrow puncture in seven cases of pernicious anemia, where the diagnosis



Showing actual size of drill and instrument for reaming out the marrow

seemed quite certain and there were only two marrows that showed the presence of a number of cells containing mitotic figures in the nuclei. The other case is that of a young woman with marked evidence of hemolysis, but very little evidence of blood regeneration, as judged from a study of the peripheral blood. She showed on examination of the marrow a moderate number of cells scattered through the smear. We considered her marrow to be hyperplastic. About two weeks after marrow puncture she was subjected to removal of the spleen. Cut No. 2 shows a section of the marrow obtained at autopsy, as she only survived the splenectomy about three weeks. This section shows what appears to be considerable cellular activity in the marrow of the tibia following splenectomy. Two transfusions before splenectomy were apparently without avail in stimulating the marrow of the long bones.

The majority of the cases, diagnosed as pernicious anemia, and in which marrow puncture has been performed by us, have yielded a marrow showing very few signs of activity as judged by number, uniform distribution of cells and presence of diversified types of cells with amitotic and mitotic divisions of nuclea. This has been due in part at least to the fact that we have been dealing, for the most part, with cases of long duration where the marrow has been practically exhausted. It seemed best, for reasons which are obvious, to begin our work with cases of this type. The data here presented is fragmentary and can not be used for critical analysis, our purpose in this paper being to present a method which we believe can be used to advantage in the study of pernicious anemia. Our basis for such belief is that we feel, in order to give intelligent prognosis in primary anemia, it is necessary to balance the degree of blood destruction against the degree of blood regeneration, as evidenced by direct study of the marrow, rather than by study of the peripheral blood alone. The method also enables one to study the effects of agents thought to be marrow stimulants. Such studies are now under way with reference to the effects of different dosages of X-Ray on the marrow. The histological study of the marrow during different phases of the disease should yield information of definite value.

The greatest service perhaps which the method has rendered us in connection with pernicious anemia, has been to awaken an interest and desire to study the disease in its entirety and to classify doubtful cases at an earlier date than has been possible in the past.

PHYSICIANS BEGIN OFFENSIVE IN THE PROBLEM OF NARCOTIC ADDICTION

The present anti-narcotic laws are not perfect by any means, but their honest, intelligent enforcement would reduce the number of addicts very materially and simplify the whole problem very much. Physicians have allowed themselves to be placed upon the defensive in this medical and public health problem by dishonest political propaganda for a long time. At last a serious organized offensive movement has been started so that the public may be informed of what some administrative officers of our government will do with the morals, health and lives of our citizens, that they may have political control of an important part of the underworld and at the same time, in some instances at least, seeure profit to themselves.

The House of Delegates of the American Medical Association, in convention assembled, on May 23, 1922, adopted the following resolution on narcotic addiction:

"Resolved, That the House of Delegates of the American Medical Association approve House Resolution No. 258 (House of Representatives, Washington, D. C.), providing for a select committee of fifteen to inquire into the subject of narcotic conditions in the United States, the personnel of the Congressional committee to include all physicians who are now members of the House of Representatives."

House Resolution Number 258, referred to in the A. M. A. resolution, was introduced by Congressman (Doctor) Lester D. Volk. It calls for the appointment of a special committee, consisting of the fifteen physician members of Congress, to investigate the narcotic evil. This resolution, which has been endorsed by a number of National and State organizations, is a fearless exposé of some of the disgraceful methods employed in the administration of present laws, both by State and Federal

officers. The resolution in full (italics ours) is as follows:

"Whereas competent medical and administrative authorities estimate that between one million and two million persons in the United States are victims of narcotic-drug addiction, and many of these unfortunates are ex-soldiers, ex-sailors, and ex-marines, members of the American Expeditionary Forces in the late World War, and the situation arising from the existence of so large a number of narcotic-drug users has created a menace to the physical and moral welfare of the citizens of the United States; and

Whereas this condition of affairs has been complicated and aggravated by administration of existing narcotic laws in the various States and of the Harrison narcotic law by the Federal Government, and *many of the rulings of the Federal Government and the provisions of State narcotic laws and sanitary codes of municipalities of the United States, point to an organized conspiracy on the part of certain administrators and physicians to drive narcotic-drug addicts into established sanitaria purporting to treat and cure narcotic-drug addictions;* and

Whereas this conspiracy has taken the course of rulings, provisions, and regulations by the Federal Prohibition Commissioner at Washington, acting for the Internal Revenue Department of the Treasury Department in the matter of narcotic control, and by the passage of statutes by various State legislatures and the regulation of narcotic-drug distribution by various boards of health of various municipalities of the United States, which are contrary to existing medical bibliography, clinical and pathological research, and the best medical and lay experience in the handling of addict patients; and

Whereas the said medical bibliography, clinical, and pathological research, ignored in the administration of Federal, State, and municipal statutes, rules, and regulations, set forth conclusive scientific proof of the grave physical reactions in the body of an addict deprived of opium derivatives, resulting in acute discomfort, collapse and sometimes death; and pathological research shows changes in blood analyses in different stages of the withdrawal of narcotic drugs from addict patients, duplicating in every particular the phenomena evidenced in cases of acute infection and commonly recognized as disease symptoms; and medical records exist that serums extracted from the blood of animals in drug withdrawal has produced the complete symtomatology of drug withdrawal when administered to unaddicted animals of the same breed; and medical history, current and foreign, reports scores of cases of congenital addiction (that is, addiction at birth), and scores of deaths as the result of improper withdrawal of drugs; and

Whereas all of these known facts have been ignored in the administration of the Harrison narcotic law and in the administration of various State narcotic statutes and municipal sanitary codes and regulations, by the issuance of rules and regulations making it impossible for the medical profession to treat narcotic-drug addicts without fear of arrest, indictment, and conviction, or interference and persecution by the criminal authorities; and

Whereas such administration of existing narcotics, Federal, State and municipal, has resulted in an increase in smuggling, peddling, and illegal distribution of opium and its derivatives, and exaggeration of conditions in the underworld resulting from the existence of a criminal type of addicts; and such administration has resulted also in a virtual monopoly in the treatment of narcotic addict patients by privately owned and operated sanitaria promoting certain routine formulas and cures for narcotic addiction; and *it is a recognized fact among competent clinicians that the physical phenomena presented by the addict patients do not lend themselves to treatment by any specific routine treatment;* and

Whereas evasion and ignorance of these facts is rapidly increasing the criminal class of addicts, spreading addiction among the curious, encouraging smuggling, and *driving hundreds of thousands of post-operative and post-war addicts of every walk of life to doubtful cures conducted by charlatans and fakers,* and these intolerable conditions, menacing the youth of the nation and the physical and moral welfare of our citizens can be corrected only by an unbiased and fearless investigation of narcotic addiction conditions in the United States; therefore, be it

Resolved, That the Speaker appoint a select committee of fifteen, and shall include therein all members of the medical profession who are Members of the House, and that such committee be instructed to inquire into the subject of narcotic addiction in the United States, the method of handling these unfortunates, the medical addenda available regarding methods of treatment by private physicians, institutions, and sanitariums, the effectiveness of the present laws, rules, and regulations to control smuggling, trafficking and abuse of narcotic drugs, and for the purpose of drafting legislation for the control of narcotic drug addiction.

For such purposes it shall have the power to send for persons, books, and papers, administer oaths, and is authorized to sit during the session or recesses of Congress, at Washington or any other place in the United States, and shall have the right to report at any time.

The expenses of the said investigation shall be paid out of the contingent fund of the House upon vouchers approved by the chairman of the said committee and to be immediately available."

All physicians should read this resolution, as well as the discussion of the subject by Congressman Volk and others, published in the Congressional Record and elsewhere. It would be as feasible to try to clarify the waters of the Mississippi River by filtration as it would be to solve the drug addict problem by treating the addicts. In both instances purity may be obtained only by cleaning the mud out of the source.

Some administrative officers have granted permits to cultists, not educated in the actions and uses of narcotics, who claim to be opposed to the use of drugs and who are not licensed to prescribe or use narcotics by the State; they have refused publicity of the names and qualifications of some who are given permits under the Harrison law; have employed unnecessary restrictive measures to physicians and surgeons licensed by the State to prescribe narcotics; have encouraged or permitted publicity tending to criticize and embarrass educated licensed physicians, and have used this publicity as a smoke-screen to hide certain methods employed in administration of these laws.

The JOURNAL has much interesting evidence on this subject about conditions closer home. We want more. Every physician in the State is requested to continue reporting to us every instance of the dispensing or prescribing of narcotics by any person not holding a California Physician and Surgeon's license.

The drug addict problem is one of the most important medical and public health questions before the citizens of this State. Dr. Volk, after accumulating nation-wide data, says that dishonest administrative officers of the Government and a few politicians of our profession are attempting to place the blame for their misdeeds upon our profession. The physicians, hospitals, nurses and other medical agencies of California—individually and through their organizations—resent the abominable situation and may be counted upon to express this resentment effectively.

EDITORIALS

MEDICINE, MEDICAL EDUCATION AND PUBLIC HEALTH IN CALIFORNIA AFTER NOVEMBER 7, 1922

When this number of the Journal is issued, important and far-reaching proposed laws regulating medical education, public health and medical practice in this State will have been decided at the polls. No electorate has been called upon before to pass upon three more important health questions than those that will have been decided by the ballot in California on November 7. The chiropractic initiative No. 16, the osteopathic initiative No. 20, and the anti-vivisection initiative No. 28, strike at the very foundation of the health protecting and medical education standards of the State.

At this writing, two weeks before election, it is impossible, of course, to predict the outcome. Under the leadership of the League for the Conservation of Public Health, all agencies that could be interested in maintaining educational standards and public health safeguards have been kept busy informing the people in a great State-wide campaign. As individuals and as members of organizations, physicians, nurses, public health nurses, social workers, pharmacists, the presidents of our two great universities, health officers, hospitals, clinics, civic organizations, insurance companies and many other persons and groups, have cooperated. It has been very difficult to arouse and sustain the interest of some who by education and training might have been expected to take an active part in a movement of this kind. The opposition were well organized and well financed. It is believed that the seriousness of the situation and the probable consequences have been outlined clearly. There are so many measures on the ballot that the apathy of some to whom the people had a right to look for guidance on these three anti-health measures may permit passage of one or more of them. If such an unfortunate result occurs, it may prove to be the stimulus necessary to awaken educated public sentiment to its responsibility at the polls.

LIFE TABLES

If we were to believe the various propaganda life statistics that are published in endless variety from various sources, and believe them as to the thousands of lives that are claimed to have been saved by this or that effort, we could easily delude ourselves into believing that the span of life was lengthening so rapidly that we could see it grow.

Cold, reliable figures, compiled by adding machines from the census of 1920, are beginning to be issued and they are disillusioning. Tables covering 74 per cent of the total population of the nation show the expectation of life at birth is 55.23 for white males and 57.41 for white females.

PHYSICIANS' OFFICES AS "HEALTH CENTERS"

One of the important resolutions passed unanimously by the House of Delegates at the last annual meeting of the State Society is printed on the front cover of this number of the JOURNAL. Contained in the minutes of the House of Delegates, as part of that resolution, is the following note:

> The State Society will supply each of its members with appropriate blank forms for this purpose, and will furnish one to any citizen who desires to use it. One of these forms presented to any member of the State Society in any part of the State will insure the courtesies and special consideration that his condition warrants and, in addition, he will receive the same sympathetic, confidential, constructive help that is given to the person who is able to pay fully for all that he requires. In carrying out this program, physicians reserve the right, when they think wise, to check up on the accuracy of the applicant's statements in an unobtrusive and sympathetic manner, in exactly the same way as those reports are now being checked up by clinics and other welfare organizations. Members also reserve the right to refer applicants for special consideration to other physicians under the same conditions and for the same reasons that they would refer patients paying regular fees. Any sick person in any part of the State of California who fails, for any reason, to secure adequate medical attention is requested to communicate with the secretary of the State Medical Society, 1016 Balboa Building, San Francisco.

It is the general impression among physicians, and the resolution itself so states, that it is a re-emphasis of the practices and policies of physicians everywhere at all times.

The blank form referred to in this resolution has been prepared and is now being considered by the Council for publication. It will be ready to distribute to members who desire to use it very shortly. Many already have requested this form and further information as to how they may make their activities conform with the spirit of the resolution.

There are two outstanding features of this resolution, the most important being that physicians are ready to render service to any person requiring professional care; that those who are able to pay the physicians' regular fees for this service should do so, those who are able to pay part should do so, and those who are unable to pay any of the fee should have the service just the same; all services, regardless of the status of the patient, to be rendered in the same high grade, confidential, sympathetic manner. The other important feature in the resolution is that it never has been, and is not now, necessary to interpose any agency not under the direct supervision and control of competent members of the medical profession between the physician and his patients.

It has been said by some that, if the spirit of this resolution were applied, physicians would not be able to give adequate care to all of the ambulatory sick in this State, particularly in certain congested centers. The facts are, that members of the medical profession *now* take care of all of the ambulatory sick, as well as those who are bedridden and require more time, and furthermore the

problem in the aggregate is not as large as some people seem to think. If all the sick people in the State of California, of whatever class, kind and condition, were divided up equally among the seven thousand educated physicians practicing in this State, they would have less than twenty sick people each to look after. If the ambulatory patients were so divided, the doctors' offices of this State would average less than ten visits per office per day.

The primary consideration in the carrying out of this or any other resolution or policy of the medical profession is, that the sick people, regardless of class of sickness, their place of residence or any other consideration, should have adequate medical care. This medical care should be available to all ambulatory patients in physicians' offices and to all others in their homes, hospitals or wherever else they may be. The resolution of the State Society is an effort to make these facilities available in a practical manner.

THE "TRAINED ATTENDANT"

The problem of the "trained attendant," the "sub-nurse," the "apprentice nurse," the "nursing aid," the "practical nurse," or members of that group of persons attending the sick who have less education than the nurse, is near the surface in the minds of all people interested in the care of the sick. These "chiropractors of the nursing profession," as one nurse recently designated them, are or are not necessary. Their future development will depend upon just one thing, and that is the solution of the problem of nursing education. If nurses or their supporters are required to invest so much time and money in education that their "investment" makes a balanced compensation more than people can pay, and if, also, the knowledge obtained makes the nurse more nearly approach the physician in her function and, consequently, less likely to perform what is usually designated upper-class maids' work, then the "trained attendant" (by some name) surely will become an important factor in the agencies of medicine. Theoretically two classes of technical service rendered by the thoroughly educated nurse and the semi-educated helper look attractive, but the actual practical working out of the theory is contrary to human nature and to past experience. Leaders of the nursing phofession have a serious responsibility in determining the future of their profession. If the League of Nursing Education could see a clear solution of their problem and act NOW they could control the situation, but prolonged discussion and reports of special committees are not getting them ahead very fast. In the meantime the world is moving and there is real danger that public opinion and practice may have determined the final result before experts get ready to act. We believe that the medical profession is ready and willing to help the nurses with their program, but they cannot help very much until the nurses agree upon a program. It would seem that leaders in nursing education might learn a lesson as to the dangers of unwise educational policies from the history of medical education. It remains to be seen whether the nurses will profit from the mistakes of the medical profession or whether they also must provide for cults in their own profession before they wake up. Whatever the end result, any worthwhile information on the subject is interesting, and for that reason the following is abstracted from an address by A. K. Haywood, M. D., to the graduates of the second class of "attendants" in Montreal:

"The trained attendant first made her appearance in Boston in 1912 through the Household Nursing Association, but it was not until 1918 that a definite course of training was established, and since that time several schools for trained attendants have been founded in Canada and the United States.

"You are no doubt aware that the course which you have just completed is open to criticism, but it is mainly the criticism that one finds directed against any new project or innovation that tends to deviate from tradition or long established custom.

"It is quite unlikely that these schools for attendants would have been established had there not been a demand for the class of service that you have been trained to render. This demand is urgent at the present time, and I have no doubt that you will find plenty of opportunities to practice your calling in this city, and it is in view of this probability that I would sound a note of warning.

"A knowledge of the needs of this community convinces one that there are scores of families who, when illness overtakes them, will find in your services a blessing. I do not wish to intimate that you will be sufficiently versed in the art of nursing to take the place of the graduate nurse. Her position and knowledge are only made possible after three years of the hardest kind of work, study and sacrifice, and it is only natural that she will view graduation exercises as you have them this evening with apprehension; but I feel sure that the graduate nurse will realize in time that it is possible for her work to be supplemented by a body of women such as you represent. One cannot help but feel that in many cases of chronic illness, in convalescence, and in caring for children, the employment of a graduate nurse would tend to produce such financial embarrassment in that family that would make her employment impossible, nor is it right that on this account some form of service should not be available for this class of patient. . .

"Your course is still in its infancy. I understand that you are the second class to graduate, and to you is entrusted a great deal of the future success of this venture. You can rest assured that you will be watched with a great deal of interest, and there is no doubt that your mistakes and shortcomings will be made capital of to the detriment of this cause.

"This course which you have just taken will undergo many changes. I hope I will not be misjudged if I venture a few suggestions as to those changes that at the present time might be profitably adopted. I cannot help but feel that your usefulness would be materially increased had it been possible for you to have supplemented your theoretical

work with practical work in institutions that lend themselves to your particular class of work. By that I mean institutions for incurables, convalescents, certain classes of children's hospitals, or even small general hospitals without training schools in which there is difficulty in securing probationers. The question is bound to be asked why not general hospitals with training schools? The answer is that experience has proved in those hospitals that have combined the attendants' course with the nurses' course that it has not been successful. The attendant has had relegated to her the most menial duties of the wards without the interesting nursing care to make this drudgery bearable. There is inevitable jealousy and friction between the two classes of pupils."

DANGERS TO PHYSICIANS IN NARCOTIC SITUATION

Occasionally physicians, through misconception of law, make serious mistakes in their observation of the Harrison Narcotic Act of the State Pharmacy Act. It appears certain enforcement agents of either the National or State Government find pleasure in taking advantage of even the smallest technicality in accusing a physician of violation of the narcotic law.

Several physicians guilty of only technical violation have been arrested. Frequently the charge is prescribing a narcotic not in good faith. To such a charge a physician makes himself liable should an individual come to his office pleading sudden illness and asking for a narcotic. It occasionally happens that an individual will come to the physician's office stating that he is an habitual user, requesting a tablet or two or more to tide him over until he can reach some alleged destination. Valuable information on this subject may be found on pages 17, 18 and 19 of the directory published by the Board of Medical Examiners and distributed to every individual licensed to practice in this State.

Every physician should familiarize himself with Section 8 of the Pharmacy Act, which requires that a report by registered mail, addressed to the office of the State Board of Pharmacy, must be made by a physician undertaking the cure of an addict "within 24 hours after the first treatment."

When a physician has been arrested on technical violation of any of the above, it has been reported that he is advised to plead guilty, pay a nominal fine, usually $100, and thus escape unpleasant publicity or notoriety. Such advice should be refused because admission of guilt forms a part of the court records, puts a stigma upon the physician, and makes it incumbent upon the Board of Medical Examiners to review the case, with the possibility of revocation of license as provided under Section 14 of the Medical Practice Act. They are also easy to punish because they have both reputation and social standing to consider.

We cannot be overzealous in advising physicians not to plead guilty of infraction of the law, unless they are actually guilty, without first consulting our office. Physicians are quick to relieve distress, thus making them easy prey.

OF SUCH ARE STATISTICS MADE!

According to the Sacramento "Union" a large program of medical examination and welfare work is being carried on for the children of Sacramento County under the jurisdiction of the local chapter of the Red Cross and Mr. Hughes, city superintendent of schools, and aided by nurses.

"Three hundred and eighty-seven youngsters were weighed and measured, and 183 were given a physical examination by the nurse." It is further stated that the welfare work in the city of Sacramento has become active with the opening of the fall term of the schools. This work "will be handled directly by a staff of three, consisting of one director and two nurses, who will watch the health of Capital City youngsters with a professionally trained eye. Heretofore the health of the Sacramento school children has been observed by the director of physical training." When nurses make physical examinations and "watch the health of children with a professionally trained eye" under the direction of a superintendent of education or a "physical director," what may we expect next? School teachers sometimes, and school nurses more often, are heard to say that they have added the practice of medicine to their other duties. What do the physicians of Sacramento think of this procedure?

CORRESPONDENCE COURSES FOR PUBLIC HEALTH NURSES

There was a time when correspondence courses for physicians, nurses, engineers and other professions were in vogue. Then the light of publicity was turned upon these institutions and most of them disappeared. Out of the social, educational and economic chaos of the last few years the idea of correspondence courses appears to have been revived. Some of the institutions offering these courses and advertising them so extensively are of such questionable character that they do not require any special consideration. However, it is a matter of interest and concern to physicians, nurses and other legitimate health workers when the health service of a great State, supported by two well-known universities, enters this field and proposes to educate public health nurses by correspondence. In a mimeographed news sheet recently "released" this combination of organizations state that they have had 287 applications for enrollment in the first course, of which 229 have paid the matriculation fee and have been accepted.

CANCER WEEK

Cancer week for this year is November 12 to 18. The purposes of Cancer Week are now so well recognized by the medical profession that it ought to be necessary only to call attention to the dates to secure the co-operation of physicians in the efforts of the American Society for the Control of Cancer.

STATE SOCIETY

ABSTRACTS FROM THE MINUTES OF THE 134th MEETING OF THE COUNCIL OF THE MEDICAL SOCIETY OF THE STATE OF CALIFORNIA

(Held in Pasadena, Friday, September 8, 1922.)

(The complete minutes of this and all other Council meetings are on file in the office of the State Society and are open to any member of the society.)

Present: Brainerd, Edwards, Kenyon, Bine, Parkinson, DeLappe, Kiger, Hamlin, Carrington, Van Zwalenburg, Kress, Paterson, McArthur, Johnson, Musgrave, General Counsel Peart.

Absent: Pope, Ewer, McLeod and Parker.

Program for 1923 Meeting of State Medical Society—The following program for the State meeting in 1923 was presented by the Publicity Bureau to the Council. This program was endorsed by the State Program Committee and later approved by that committee:

The State Society will hold its regular annual meeting on Friday and Saturday, June 22 and 23, 1923, preceding the American Medical Association meeting Monday to Friday, June 25 to 29, 1923. The outline of the program for this meeting will be as follows:

1. Meeting of the Council—Thursday evening, June 21, at 8 o'clock.
2. General Session of the State Medical Society—Friday morning, June 22, at 10 o'clock.
3. Section Meetings, each section to meet separately—Friday afternoon, at 2:30 o'clock. Each section to hold only this one meeting. This to transact such business as is necessary and to read a full program of papers by title. One or a few papers may be presented in full at the option of the sections.
4. Meeting of the House of Delegates and meeting of the Council with officers of county societies and section officers—Friday evening, June 22, at dinner.
5. General Meeting—The League for the Conservation of Public Health—Saturday morning, June 23, at 10 o'clock.
6. Meeting of the House of Delegates—Saturday afternoon, June 23, at 2:30 o'clock.
7. Meeting of the Council—Saturday evening, June 23, at dinner.

Articles of Incorporation of Medical Society of State of California—General Counsel Peart read the present articles of incorporation and discussed the subject generally, stating that at this time it would be inexpedient to proceed with this matter to a definite conclusion and recommending that this matter be held under advisement until more definite information could be obtained. This action was approved by the Council, and a later report will be rendered by the General Counsel.

Woman's Auxiliary to State Medical Society—The constitution and by-laws of the Woman's Auxiliary to the State Medical Society of Texas, with explanatory letter of its activities, was considered. The secretary discussed the matter fully with a view of informing the Council regarding what might be expected from the formation of such an auxiliary to the California State Medical Society. Upon motion of Kress, seconded by Parkinson, it was

Resolved, That the Publicity Bureau investigate this matter and report further before taking action.

Relation of Section Officers to Central Office of State Medical Society—Upon motion duly made and carried, it was unanimously

Resolved, That the relations between officers of sections and the central office of the State Society should be more intimate in the handling of affairs which arise from time to time throughout the year; and further, that conferences and consultations between the State Society and these sections on such subjects should be encouraged; and further, that such section officers are, so far as the constitution and by-laws of the American Medical Association and the State Society permit, officers of the State Society, with duties as above outlined in addition to those of arranging and conducting the programs for the annual meetings.

California Association of Radiographers—The resolution on this subject passed by the House of Delegates was brought up for consideration, by the Publicity Bureau May 26, 1922, and the secretary was instructed to forward a copy of this resolution officially to the California Assocaition of Radiographers, with the following letter of transmittal:

"Your letter dated May 11 was duly received, but it was impossible for the Publicity Bureau to meet with you prior to the annual meeting of the State Medical Society, which convened at Yosemite May 15.

"Your letter was duly placed before the Council of the State Society. Following the introduction of a resolution upon this subject in the House of Delegates, the entire matter came before the Council for its recommendation and the enclosed resolution was unanimously recommended for passage to the House of Delegates, and thereafter unanimously adopted by the House of Delegates at its meeting held May 17, 1922.

"I am instructed by the Publicity Bureau at today's meeting to forward the enclosed copy of the resolution to you, and to request that you give it your consideration as soon as possible and advise the Publicity Bureau of your attitude thereon."

Associate Secretary—The Publicity Bureau approved the selection of Dr. Howard H. Johnson as associate secretary, with the understanding that the matter be brought to the attention of and secure the endorsement of the Council.

Industrial Medicine—A committee on the study and consideration of the proposed special plan for Industrial Medicine Practice, consisting of Bine, Parkinson, Graves and Johnson (Graves absent) discussed the proposed plan and, upon motion duly made and carried, it was unanimously

Resolved, That a special committee consisting of James H. Parkinson, chairman, and George W. Goodale, Lester Newman and Howard H. Johnson be appointed to draw up plans for carrying out industrial medicine practice through the State Medical Society; and further, that they draw up a fee schedule; and further, that said plans and fee schedule be completed and referred to the Publicity Bureau and Committee on Industrial Accident Work for criticism or approval.

Question of Moving the Office of the State Society—The matter of moving the office of the State Society was considered by the Publicity Bureau, as removal had become necessary because of requirement that a lease be signed for a period of three years at an increased rental guaranteed by an individual doctor or group of doctors, if the offices remained in the Butler Building. It was the recommendation of the Publicity Bureau that the offices be moved to the Balboa Building and that the secretary be authorized to make the necessary arrangements, as the above requirements do not have to be met in the Balboa Building. Also there is a decreased rental with one room less than now occupied in the Butler Building. This action was approved by the Council.

Hospital Associations—Letters and literature from various "hospital associations" were presented and discussed. The secretary-editor was instructed to write a series of articles for the Better Health Service of the League for the Conservation of Public Health on "Good and Bad Hospital Associations."

Publicity Bureau Meetings—The matter of the Publicity Bureau meetings was taken up and it was voted that the Publicity Bureau meet the first and third Thursday of each month at the office of the State Society, at noon.

Harrison Narcotic Act—The secretary-editor was instructed to write an editorial for the Journal, giving the dangers to physicians in the narcotic situation. It was suggested that he include in this

article all the technical trivialities by which doctors are endangered.

Appointment of Officers for New Sections—Upon recommendation of the Publicity Bureau, the Council approved the appointment of the following officers for the new sections created at the 131st meeting of the Council:

1. Section on Physiology, Chemistry and Pharmacology, including Physiological Chemistry, Biological Chemistry, Pharmacy, Chemotherapy, and similar allied sciences—Chairman, Walter C. Alvarez, San Francisco; secretary, W. D. Sansum, Santa Barbara.

2. Section on Anatomy, including Surgical Anatomy, Embryology, and similar closely allied sciences—Chairman, I. S. Ritchie, Loma Linda; secretary, C. Latimer Callander, San Francisco.

3. Section on Applied Biology, including Parasitology, Serology, Immunology, and similar closely allied subjects—Chairman, Alfred C. Reed, San Francisco; secretary, John V. Barrow, Los Angeles.

4. Section on Dermatology and Syphiology—Chairman, Howard Morrow, San Francisco; secretary, Moses Scholtz, Los Angeles.

Incorporation of Indemnity Defense Fund—The general counsel reported the result of his investigation of the proposed establishment of the Indemnity Defense Fund as an independent corporation in conformity with a resolution passed by the Council at its 133rd meeting in Yosemite, May 18, 1922. After an extensive investigation of this subject he expressed the opinion that the most feasible method of procedure would be to incorporate the Indemnity Defense Fund with capital of at least $100,000 in excess of all liabilities. The general counsel discussed the record of other companies from reports on file, which seemed to show that the formation of such a company, with the advantages available in the present Indemnity Defense Fund in its relation to physicians of the State of California, would be advisable and advantageous.

Upon motion of Parkinson, seconded by Paterson, it was

Resolved, That the present committee continue its efforts to obtain the required subscriptions of capital stock by canvass of the members of the Society and proceed to draft necessary papers, and that a further progress report be made to the council at a special meeting, if necessary.

Medical Service for Disabled Veterans of the World War—The secretary submitted the offer of medical and hospital service to disabled veterans of the World War, made by the Medical Society of the State of California in conjunction with the same offer by the Hospital Section of the League for the Conservation of Public Health. Upon motion of Parkinson, seconded by McArthur, it was

Resolved, That the council officially endorse the action of the secretary in offering the services of the medical profession of the State of California to the Disabled Veterans of the World War.

Resolution from the Section on Anesthesiology—The secretary presented the following resolutions from the Section on Anesthesiology, which they requested be brought to the attention of the Council of the State Society:

"Resolved, That the Section on Anesthesiology of the California State Medical Society hereby expresses its appreciation of the House of Delegates and Council for its creation and hopes through its activities in the future to extend the advancement of the specialty in every possible way.

"Whereas, the protection and safety of human life is a paramount issue in the practice of medicine, therefore, be it

"Resolved, that the Section on Anesthesiology endorses the action of the Section on Radiology in eliminating the technician from this vital phase of medical practice, and further, be it

"Resolved, that the Section on Anesthesiology approves and urges the continued activity of the California State Medical Society in eliminating the lay technician from the practice of anesthesia."

Action by the Council: Upon motion of Parkinson, seconded by Hamlin, it was

Resolved, That this resolution be accepted and placed on file.

Gorgas Memorial—The secretary presented the matter of the Gorgas Memorial data, which was fully discussed. Upon motion of Parkinson, seconded by Kress, it was

Resolved, That the council request the president of the State Medical Society, in accordance with the request of the American Medical Association, to appoint a Statewide committee for the purpose of securing funds for the Gorgas Memorial.

Industrial Medicine—(Note—George W. Goodale, Lester Newman and Gayle G. Moseley were called in to discuss this question and Dr. Goodale's "Plan of Operation.") Goodale presented his revised "Plan of Operation," together with proposed "Special Fee Schedule," and the whole matter was fully discussed.

Action by the Council: Upon motion of Parkinson, seconded by Bine, it was

Resolved, That the whole matter be referred to the Committee on Industrial Accident Work for conferences with Goodale and any persons who may be considered interested in the matter, and that the committee report back to the council when ready to submit a digest of the matter; and further, that the secretary be instructed to call a special meeting of the council to hear this report.

Sins and Sorrows of the Colon—A. F. Hurst, discussing this subject in the British Medical Journal of June 17, says: "The sins of the colon are its diseases. But I sometimes wonder whether it is not more sinned against than sinning, for whether with attacks from above with purges, attacks from below with douches, and frontal attacks by the surgeon, the sorrows are numerous and real.

"If the fortunes made from purgative pills had been devoted to hospitals which treat the victims of their abuse, the financial problem of the voluntary hospitals would have been solved. About ten million pounds were expended in 1921 on patent medicines, the majority of which contained purgatives.

"On several occasions, when I have been asked to decide whether the operation of colectomy, which had been recommended for 'intestinal stasis,' should be performed, I have found that all the symptoms disappeared on giving up purgatives and adopting some rational treatment. It is said that the description Gulliver gave the Houyhuhnms of the habits of his fellow-countrymen is as true today as it was in 1727: 'They take in at the orifice above a medicine, equally annoying and disgusting to the bowels, which relaxing the belly drives down all before it; and this they call a purge.'

"Pliny tells how Egyptians learnt to wash out their bowels from observing the habits of the ibis: 'He washes the inside of his body by introducing water with his beak into the channel, by which our health demands that the residue of our food should leave.' It is cruel to deprive the ibis of his claim to this epoch-making discovery, but the truth must be told: the ibis does not give himself a douche, but after washing his beak in water he oils it in his preen gland, which is situated near the anus, in preparation for preening his feathers.

"In the seventeenth century the enema reached the height of its popularity. It is recorded that Louis XIV received several thousand intestinal douches in the course of his life, and that the pious Duchess of Alva treated her sorely ill son with enemas of an emulsion of religious relics. Unhappily, they failed to save him.

"The last twenty years have seen a remarkable revival in the popularity of the intestinal douche, a popularity which has led at times to its indiscriminate use for conditions in which it was not suitable. It is a valuable remedy, but its precise indications require to be defined."

COUNTY NEWS

ALAMEDA COUNTY

Alameda County Medical Association (reported by C. L. McVay, M. D., secretary-treasurer)—At the October meeting Herbert Samuels and Mr. Gould, executive secretary of the proposed International Public Health and Safety Exposition, addressed the meeting on the plans contemplated by the Executive Committee of the Exposition. These plans were more fully commented on by Alvin Powell.

The evening program consisted of a paper read by A. H. Rowe, "Diagnosis and Treatment of Thyroid Disease as Controlled by the Metabolic Rate." (1) Comments on technique and interpretation of the metabolic rate. (2) Pathology of thyroid. (3) Clinical use of rate determination in adenoma, hypertoxic goitre and hypothyroidism.

The paper was illustrated by lantern slides and discussed by Moffett and W. H. Strietmann.

George Rothganger read a paper on "Paralytic Pes Cavus." (1) Mechanism of the development of paralytic talipes in general. (2) The special factors in pes cavus. (3) Methods of treatment. (4) The extension of operative measures to other allied deformities. M. L. Emerson led the discussion on these papers.

In November the Fresno County Society will present a program before the Merritt Hospital staff council. This program reciprocates one which was given before the Fresno County Society on April 17, 1922, by the Merritt Hospital staff.

BUTTE COUNTY

Hospitals, Clinics and Laboratories (reported by Dr. J. O. Chiapella, secretary Butte County Medical Society)—

Enloe Hospital, Chico, 35 beds; Dr. Enloe, executive.

Oroville Hospital, Oroville, 35 beds; Miss Agnes Curran, executive.

Butte County Infirmary at Thermoletis, 100 beds; J. F. McDonald, executive.

Sisters' Hospital at Chico, 20 beds.

Eye, Ear, Nose and Throat Hospital at Chico, 3 beds; (emergency only) Dr. J. O. Chiapella.

Chico Health Center Clinic, Miss L. Wade, district nurse; President Dr. J. O. Chiapella, executive.

X-Ray Laboratory at Enloe Hospital, Dr. W. B. Johnston, Dr. R. E. Poole, Dr. D. H. Moulton, Dr. P. L. Hamilton.

FRESNO COUNTY

Fresno County Medical Society (reported by Thomas F. Madden, secretary)—The October meeting of the Fresno County Medical Society was held at the residence of the president, G. W. Walker, on the evening of October 3, 1922. Those present were: Aller, Anderson, Barrett, Bell, Brown, Broemser, Collins, Couey, Cross, Craycroft, Ellsworth, Goldberg, Hayden, Jamgotchian, Konigmacher, Kjaerbye, Madden, Manson, Mitchell, Miller, Montgomery, Morgan, Milholland, McPheeters, Pettis, Pomeroy, Sciaroni, Sheldon, Thompson, Tillman, Tobin, Tupper, Wahrhaftig, J. R. Walker, G. W. Walker, Weddle, Wiese, Willson, Vanderburgh, Dearborn, Quimby, Scarbora, with S. H. Hurwitz and A. S. Kilgore of San Francisco as guests and speakers.

S. H. Hurwitz gave an interesting talk on "The Newer Aspects in the Treatment of Asthma." The speaker outlined the recent work being done in the diagnosis and treatment of asthma, reminding us that much of the best work is done in the United States. Discussion by Pettis, Barrett, Tillman and Walker. A. S. Kilgore outlined the work to be undertaken during "Cancer Week," which is the week following election in November. Guy Manson is in charge of this work in Fresno County.

Fresno County Hospital—The regular monthly meeting of the staff of the Fresno County Hospital was held at the hospital on the evening of October 10, 1922. P. S. Barrett of the department of pediatrics presented a case of neuro-syphilis in a child and discussed the subject at some length. Discussion by Bell, Konigmacher, Tupper and Vanderburgh.

LASSEN-PLUMAS COUNTIES

Lassen-Plumas Counties Medical Society (reported by G. S. Martin, secretary)—The Lassen-Plumas Counties Medical Society met October 7 at the Riverside Hospital, Susanville, as guests of the hospital. The meeting was for the purpose of reorganization and electing officers, and was very successful. Several of the visiting doctors had to travel quite a long distance, and are to be highly commended for their interest in society work. Officers were elected as follows: R. W. T. Garner, Susanville, president; B. J. Laswell, Quincy, vice-president; G. S. Martin, Susanville, secretary-treasurer; C. L. Smith, Greenville, W. W. Peterson, Quincy, H. A. Collings, Johnsville, board of censors. S. M. Sproat, Portola, delegate to next State meeting with Dr. Peterson as alternate. The next meeting will be held at the same place the afternoon of the first Saturday in November, and a scientific program is being arranged. This will be the last meeting of the year, as the heavy snow will soon have the roads blocked.

LOS ANGELES COUNTY

Methodist Hospital, Los Angeles, accredited by the American Medical Association—Upon recommendation of the California committee, the Council on Medical Education and Hospitals of the A. M. A. has placed the Methodist Hospital of Los Angeles upon the accredited list in the following letter to Mr. L. G. Reynolds, superintendent of the hospital:

"The council has been pleased to receive the information furnished by you, together with that supplied by Dr. Musgrave, accompanied with his hearty recommendation of your hospital, and we are pleased to say that the council has placed the Methodist Hospital of Southern California upon the list of hospitals approved for giving the fifth year in medicine.

"We want this letter to be taken as an expression of our sincere appreciation for the good work you are doing, and our wishes that your success and progress may be continued.

"A notice of this recognition will be published in an early issue of the Journal of the American Medical Association, also in the American Medical Directory, now being revised, as well as in a separate pamphlet for mailing to medical colleges and prospective interns."

Seaside Hospital, Long Beach, accredited by the American Medical Association—Upon the recommendation of the California committee, the Council on Medical Education and Hospitals of the A. M. A. has placed the Seaside Hospital of Long Beach upon the accredited list in the following letter to Miss Alice G. Henninger, superintendent of the hospital:

"The data supplied by you directly, and also through Dr. Musgrave, and his very good recommendation of your hospital have been considered, and it is a pleasure to say that the council is placing your hospital on the list of hospitals approved for the training of interns or giving the fifth year in medicine.

"Please accept this letter as assurance of our sincere interests in the further development and progress of the Seaside Hospital.

"Notice of this recognition will be published in an early issue of the Journal, also in the American Medical Directory and ina separate pamphlet for mailing to medical colleges and prospective interns."

St. Vincent's Hospital of Los Angeles, accredited by the American Medical Association—Upon the recommendation of the California committee of the Council on Medical Education and Hospitals of the A. M. A., St. Vincent's Hospital of Los Angeles has been placed upon the accredited list in the following letter to the Sister Superior of that institution:

"We are pleased to notify you that the Council on Medical Education and Hospitals of the American Medical Association has placed the St. Vincent's Hospital upon the list of hospitals approved for giving the fifth year in medicine.

"Along with this recognition we want you to be assured of our continued interests and our sincere hope that the progress which has marked your pathway in the past, may characterize your entire future career. To this end our council will go the limit in giving any possible assistance. We know that Dr. Musgrave and his committee, representing our council, will enjoy your co-operation and the pleasure of working in your behalf."

MARIN COUNTY

Marin County Medical Society (reported by C. A. De Lancey, secretary)—Marin County Medical Society held its monthly meeting on the last Thursday of September at the offices of F. W. Jones in San Rafael. Dr. Lester Newman was the speaker for the evening. His subject was the Workman's Compensation Law of California in connection with the medical service, and the control of the Industrial Accident Commission. The following is a résumé:

It is to be understood that a patient who is a beneficiary under the Workmen's Compensation Act is primarily in the service of the insurance carrier, and not the surgeon. The legal responsibility is that of the insurance carrier. There is a triple relation between the employer, injured man, and the physician. The latter is, perhaps, the greatest factor therein; hence, he should give careful medical service, and forward careful records with promptness.

These reports are not merely red tape, but represent absolute necessity in the adjustment of cases. Payment of compensation is the prime purpose of this law; hence, delay by the physician hinders fulfillment of the law. Physicians should not withhold reports awaiting solicitation; voluntary contribution of data is essential to efficient industrial medical service.

The rendering of reports should not be assumed as a burden by the surgeon; they are nothing more than a duplication of the data which should be kept in any office where the surgeon attempts the practice of medicine. Accurate diagnosis, prognosis and treatment is absolutely essential. Necessary services only should be charged for. The surgeon is morally responsible for allied medical costs. Patients should be treated to a closure, and any lack of co-operation of the patients should be referred to the carrier. The history of the case is necessary to determine its compensability, and incidentally this is a burden, part of which the surgeon must bear. The carrier should not be censored unjustly for non-payment of bills. All patients are to be considered a private responsibility until the burden of such responsibility is shifted legally elsewhere.

Ross Sanitarium has added a unit of cottages for chest conditions. They are located high in the hills, where they are afforded much sun and fresh air and where they are spared any of the occasional fogs of that valley.

MERCED COUNTY

Merced County Medical Society (reported by Brett Davis, secretary)—The October meeting of the society was held on the 5th in the City Hall at Merced. A considerable number of the members of the society were present, and J. H. Woolsey and Burt Stevens of San Francisco were visitors.

Dr. Woolsey read a paper on "Cancer of the Lower Bowel," illustrated by lantern slides. The paper was discussed by all the physicians present.

Stevens discussed the three Anti-Health initiatives on the ballot, and invited the co-operation of members in the work of the League for the Conservation of Public Health.

Mr. Ira Hoover, architect, submitted final plans for the Mercy Hospital, which were considered and approved at a special meeting on October 7.

ORANGE COUNTY

Santa Ana Valley Hospital—Encouraging reports are received from Santa Ana to the effect that definite progress is being made in the amalgamation of the Santa Ana Valley Hospital Association and the Santa Ana Community Hospital Association under the name of the former. It is reported that preliminary agreements have been reached, and the outlook for a fine hospital for Santa Ana is very bright.

PLACER COUNTY

Placer County Medical Society (reported by Robert A. Peers, secretary)—The Placer County Medical Society met in the Masonic Temple, Auburn, Calif., October 7, 1922, being called to order by the president, Charles J. Durand. The following members were present: Charles J. Durand, Colfax; F. L. Horne, Auburn; H. M. Kanner, Colfax; G. H. Fay, Auburn; H. N. Miner, Blue Canyon; W. L. Whittington, Weimar; F. E. McCullough, Lincoln; R. J. Nicholls, Auburn; R. T. Rooney, Auburn; E. E. Ostrum, Loomis; J. A. Russell, Auburn; J. G. Mackay, Auburn; W. P. Sawyer, Nevada City; R. A. Peers, Colfax. Visitors: F. F. Gundrum, Sacramento; C. E. Lewis, Auburn.

The following physicians reported unusual cases seen in their practice since the last meeting: Miner, Nicholls, Lewis, Ostrum, Sawyer and Peers.

F. F. Gundrum of Sacramento gave an address on "The Diagnosis of Acute Conditions Presenting Bulbar Symptoms," which was discussed by the following members: Mackay, Sawyer, Miner, Kanner, Horne, McCullough and Gundrum.

W. P. Sawyer of Nevada City made a report on the three amendments in which physicians are particularly interested and which will appear on the ballot November 7. It was agreed by all present that they should endeavor in every way to place the issues on these three measures squarely before their patients and the general public before election.

RIVERSIDE COUNTY

Riverside County Medical Society (reported by Thomas A. Card, secretary)—The October meeting of the Society was held on the 9th of the month with 30 members, 10 visitors present, and 14 members absent. John C. King was transferred from active membership to honorary membership. Harold E. Morrison was transferred to Los Angeles County Medical Society, Iner-Sheld

Ritchie was transferred to San Bernardino County Medical Society, and J. W. Camp was transferred to Orange County Medical Society. Riverside Community Hospital project is going forward rapidly. Plans for a one-story 100-bed hospital have been drawn and accepted. Funds are being collected and it is hoped to start construction by January, 1923. Plans for the establishment of a full time city and county health department are under way.

An unusual case of uro-genital infection was reported by James Steinberg of Los Angeles and discussed by H. R. Martin of Riverside. Medical economics with special reference to plans for effective work, was discussed by W. T. McArthur of Los Angeles and C. Van Zwalenburg of Riverside. A buffet luncheon was served at the close of the program with Drs. Adams, Atkinson, Atwood, Bacr, Baird and Bramkamp as hosts. Mr. L. B. Saunders, director of the Riverside Community Hospital, presented the following message to the members:

"Superficially one hospital day is like another; from the smell of ether to the cry of the newborn babe; but teasing problems of hospital administration are ever present. The future Riverside Community Hospital is conceived in a spirit of service for the protection and promotion of health, possessing every known resource for the attainment of these aims. It will be a house of healing—non-sectarian—for the poor and the well-to-do alike, seeking to render a perfect service to its patients. We shall strive to become a model household where health and happiness prevail. The people of our county should be thoroughly posted as to the necessities and advantages of a modern community hospital. In such spirit we call to the doctors of the County Medical Society and ask their hearty co-operation."

SACRAMENTO COUNTY

Sacramento Society for Medical Improvement (reported by G. J. Hall, secretary)—The September meeting was held at Sacramento Hotel on the 19th of the month. President Dillon and twenty-six other members and one visitor were present. Gundrum reported a case apparently gonococcic infection that also had heart disease and nasal diphtheria. Antitoxin was administered, and a week later improvement was marked. The cardiac symptoms and findings indicated that the important infection was diphtheria. O'Brien reported an unusual case of spider bite. Beattie reported a case of tuberculous peritonitis in child four months of age. Free vomiting for several days. Temperature 100.5 per rectum. Abdomen distended. No stool; food all vomited. Controlled by serial feeding. Had been fed breast and milk from cow not tuberculin-tested and not pasteurized. Leucocyte count 13,000, 60 per cent polys. Negative Von Pirquet test. Decided to operate, thinking it an ileus. Peritoneum studded with tubercles. Post-mortem showed bovine tuberculosis. A. K. Dunlap presented the subject of "Recurrence of Symptoms Following Operation on Biliary Tract." Statistics on recurrence or secondary operations from 10 to 15 per cent of all cases. Diet during post-operative stage most important portion of paper presented. Series of forty-two cases presented, which developed symptoms after operation. Weight of opinion is toward removal of bladder. Gall-bladder was drained in twenty-nine of Dunlap's cases, and removed in fourteen. Stones were frequent causes of secondary symptoms. Two had reformed or overlooked stones in common duct; three had chronic pancreatitis. Function of pancreas considered—most important of digestive organs. Pancreas has external secretions, internal secretions, and metabolic action. Diabetes and glycosuria were discussed in this connection. Symptoms of other pancreatic abnormalities were given. In considering various methods of determining information on pancreatic juices, diet was classed as negative rather than positive. Fats, milk, pork, preserved fruits to be avoided; carbohydrates to be restricted. Patients appear to handle fresh fruits very well. Dunlap concluded that:

1. Simple drainage of gall-bladder more often than removal is followed by secondary symptoms.
2. Infection of biliary tract is important in etiology.
3. Chronic pancreatitis is an important factor.
4. Deficiency of external secretions of pancreas.
5. Laboratory tests for pancreatic deficiency are unreliable, to say the least. In majority of cases the physician will be forced to depend upon symptoms and therapeutic trials.

In discussion, Harris emphasized the importance of continued drainage and proper diet after operation. James called attention to ulceration of gall-bladder as a factor to be considered. Advanced inflammation of gall-bladder, when found, indicates removal of gall-bladder. Simmons related personal experience about cholecystectomy. He can take olive oil well. Suggests avoidance of long drainage for prevention of adhesions. Schoff congratulated writer of paper, and reiterated his previous statement that local men can present real papers. Reardan discussed the paper from a medical standpoint. Reported case of gall-bladder drainage followed later by operation with drainage of ducts, and later still by cholecystectomy. Two years after last operation patient was found to have amebic dysentery also. Drainage will not cure chronic gall-bladder conditions.

Hall, secretary, reported on his trip to the Hospital Convention at Pasadena, held under auspices of the League for the Conservation of Public Health, and also the meeting of the State Medical Society officers and county officers. He briefly covered the subject of the hospital meetings. Discussed at length the present political activities of the League, and asked for co-operation of the individual members of the local society in putting over the campaign against the three initiative measures at the coming election. Parkinson delivered a few pertinent remarks relative to the general apathy of individual members of the society in reference to their duty on matters of general and civic welfare. S. E. Simmons, Dufficy, and James were appointed a committee to draft resolutions on the death of Thomas J. Cox. Health Officer Hall presented a plan for a free municipal general clinic. This matter was freely discussed by many members of the Society, and upon motion by Howard the Society endorsed the clinic.

SAN BENITO COUNTY

San Benito County Medical Society (reported by C. W. Merrill, secretary)—The Society met on September 20, with six members present and one visitor. An interesting program was presented, consisting of discussion of a case of anthrax, with recovery; a case of chronic tetanus, a boy fifteen years of age, ill since June 1, but now in school; and the report of the death of an infant from inunctions of carbolated vaseline.

SAN DIEGO COUNTY

San Diego County Notes (reported by Dr. Robert Pollock)—The Medical Society has been enjoying its new place of meeting—Science Hall in Balboa Park—which has been placed at its disposal by the San Diego Museum Association. This hall comfortably seats 125, has a high ceiling, is well ventilated and heated, and has excellent acoustics. It is removed from traffic noises and adjacent to good parking space for autos; in other words, it possesses most of the requisites of a place of meeting for small scientific bodies.

The regular meeting of September 26 featured two papers, (1) Sinus Infection, by Dr. H. D. Cornell, and (2) Epidemics of Vomiting Among

Children, by Robert G. Sharp. Dr. Sharp's paper drew attention to recurring epidemics of vomiting apparently of toxic character occurring in children, and advances the treatment of temporary fasting and the administration of glucose by rectal drip method. This paper is printed in full in the San Diego Medical Bulletin of October 6.

On Saturday evening, October 7, the members of the Society were the guests of the Commander and medical staff of the new Naval Hospital in Balboa Park. The paper of the evening was an excellent presentation of the subject of prostatectomy by Arthur B. Cecil of Los Angeles. Dr. Cecil's paper covered the subject comprehensively and was supplemented by moving pictures, giving details of the operation by perineal route from the time of the preparation of the patient for the operation until the removal of the sutures some days afterwards. At the close of the program, by invitation the members adjourned to the Administration building, where an attractive luncheon had been provided, which added zest to a social hour, again attesting to the hospitality of the service men about San Diego. This hospital, opened only a few weeks ago, has four hundred beds occupied.

Paul M. Carrington announces his withdrawal from the management of the Alpine Sanatorium for the tuberculous at Alpine.

The physicians of San Diego and the entire community share in the loss sustained by St. Joseph's Hospital in the death, October 6, of Mother Superior Mary Michael, who only a few months ago celebrated her fiftieth anniversary—her Golden Jubilee of service in the Order of the Sisters of Mercy.

The Alpine Sanatorium—Dr. P. M. Carrington, who recently accepted an appointment as medical director of the Alpine Sanatorium, announces his withdrawal from all connection with that institution. Dr. Carrington assumed the medical direction of the sanatorium July 1. Since that date the Public Health Service, of which Dr. Carrington is a retired officer, entered into a contract with the sanatorium for the care of the consumptive sailors of the Merchant Marine, more than a score of whom recently were transferred there from Camp Kearny.

When asked the reason which impelled him to sever his connection, Dr. Carrington said:

"Circumstances have arisen in regard to the medical management of the Alpine Sanatorium under which I would not have full charge of all the patients. I felt that I could not continue my connection under those conditions, so have withdrawn."

Immediately following Dr. Carrington's withdrawal, four other physicians, constituting the consulting staff, also announced their withdrawal from any connection with this institution. They are Dr. H. C. Oatman, Dr. James E. Churchill, Dr. Robert Pollock, and Dr. R. de Lecaire Foster.—The Bulletin of the San Diego County Medical Society, October 6, 1922.

Staff Meeting of St. Joseph's Hospital—A special meeting of the staff was called to order by the chairman, Dr. H. C. Oatman, for the purpose of a joint meeting with the staff of the county hospital.

The regular business of the staff was dispensed; the chairman announced that a joint meeting of the two hospital staffs would give an opportunity to the visiting officers of the League of the Conservation of Public Health to discuss three bills coming before the next election—the Chiropractic bill, No. 16, the Osteopathic bill, No. 20, and the Anti-vivisection bill, No. 28.

The executive head of the hospital standardization movement, Dr. W. E. Musgrave; his assistant secretary of the State Medical Society and assistant editor of the State Journal, Dr. H. H. Johnson; the executive secretary of the League of the Conservation of Public Health, Mr. Celestine J. Sullivan; the legal advisor of the State Medical Society, Mr. Hartley Peart, and the legal advisor of the State Board of Medical Examiners, Mr. Homer Castellaw, were present. These gentlemen impressed upon the meeting the necessity of every medical man doing all in his power to defeat these bills. The outline of the propaganda was discussed and the suggestion made to follow out the program given by the League. Any amount of literature may be procured through the association's headquarters for distribution to patients and friends.

Dr. Musgrave announced that the committee would recommend that St. Joseph's Hospital and the San Diego County Hospital would be placed on the accredited list of the American Medical Association.

The chairman stated that a new St. Joseph's Hospital is to be built, commencing December 6, 1922.—Bulletin of the San Diego County Medical Society, September, 1922.

SAN FRANCISCO COUNTY

San Francisco County Medical Society (reported by LeRoy H. Briggs, secretary)—The Society and its various sections held four meetings during September. All abstracts of papers that have been received by the editor are given. The Journal will be glad to publish abstracts of 100 words or less of any paper presented to any county society.

"Some Misconceptions about Malnutrition." In discussing this subject at the meeting of September 12, Harold K. Faber stated: "Malnutrition is very commonly regarded, not only by the public, but by physicians, as the exclusive result of underfeeding. In fact, malnutrition due to underfeeding is true of only a small percentage of cases and it is related directly to diet in probably not over 40 per cent of cases. The diagnosis is up to the physician, but he should keep in mind that the medical causes are no more frequent than the social and hygienic causes. A child may be underweight because he has adenoids or tuberculosis or diabetes, but in many instances it is because he is sleeping too little or bolting his food or is worried by the conditions of his home life. These are mere illustrations of the many causes which must be looked for, but they show the sort of problem which a conscientious physician has to solve when he deals with malnutrition. Too many physicians have disregarded the danger sign of malnutrition as of too little consequence. It is a danger sign and a clue and means a lowered resistance to infection and to fatigue. The commonest misconception in this field concerns the value of height-weight standards. These standards have been attacked by laity and medical men who think that children may be normally thin, either from heredity or during periods of rapid growth. It should be clearly understood that no significance is attached by some authorities to less than 7 per cent underweight by the standard, and by others to less than 10 per cent. Such allowances will be found to take care of congenital and seasonal thinness. There is a large mass of clinical data showing that no child who is free from physical defects is 10 per cent or more under standard weight for his height, and that nearly all children 7 per cent or more underweight are suffering from physical defects or from faulty habit of hygiene or environment. Such being the facts, it is clearly the duty of every physician called upon to examine a malnourished child to make a really careful investigation of his physical condition, or his diet, of his habits and of his surroundings. He will rarely fail to discover correctible causes, the removal of which will improve the child's health and better his future."

Relief Home for Aged and Infirm—On November 21 a special election will be held in San Francisco County at which time the voters are being requested to authorize a bond issue of $2,000,000 for

the replacement of the wooden buildings now occupied by the Relief Home. The group of buildings constituting the Relief Home house over 1000 people.

St. Joseph's Hospital Staff Active—W. T. Cummins, director of the department of pathology and laboratories, addressed the hospital staff on September 20 on "The Value of the Chemical Laboratory." This department is increasing in importance and now has two technicians, a Sister and Miss Dora Dasenbrock, and another Sister statistician.

Others who spoke at the September meeting were: William Quinn, on "Suppurative Appendicitis"; R. F. Grant, on "The Ochsner Treatment," and David Stafford, on "Gastric Ulcer."

At the October meeting A. S. Musante spoke on "Surgical Centers of the East," touching on observations made in a two months' tour, and urging that annual clinics at the local teaching hospitals be held, starting next year. Case records were presented by Otto Laist on "Mediastinal Tumor," and R. H. Berndt, on "Pyelitis."

William Reilly was elected vice-president of the staff and J. M. Stowell and D. D. Stafford were appointed on the executive board.

On November 15 H. A. Ryfkogel will talk on "The Diagnosis of the Acute Inflammation of the Abdomen."

SANTA BARBARA COUNTY

Santa Barbara County Medical Society (reported by A. C. Soper, secretary)—The September meeting was held at the Cottage Hospital with President Mellinger in the chair. Fourteen members and one candidate for membership were present. Dr. Koetter presented a case of hypopituitarism. "Retention Products in the Blood," with special reference to the urological features, was discussed by George F. Farnam. "Effect of Radiation on the Flora of the Tonsils" was the subject of a paper by H. J. Ullman, who discussed the relative values of radiation and surgery in this connection.

SANTA CLARA COUNTY

Hospitals, Clinics and Laboratories (reported by Dr. E. P. Cook, secretary of Santa Clara County Medical Society)—

San Jose Hospital, San Jose.
Columbia Hospital, Inc., East San Jose.
O'Connor's Sanitarium, San Jose.
Santa Clara County Hospital, San Jose.
County Hospital Clinic, San Jose.
Good Cheer Clinic, San Jose.
X-Ray Laboratory of Dr. Richards and Dr. Bullitt, San Jose.
Associated Radiograph Laboratories, San Jose.
Finley M. Eastman, Pathologist, San Jose.
Petry Sanitarium, Mountain View.
Palo Alto Hospital, Palo Alto.
Palo Alto Hospital X-ray Laboratory, Palo Alto.
The Gilroy Private Hospital, Gilroy.
The Children's Clinic, Gilroy.
X-ray of Dr. Elmer Chesbro, Dr. J. A. Clark, Gilroy.
The Good Cheer Clinic, Los Gatos.

YOLO COUNTY

Hospitals, Clinics and Laboratories (reported by Dr. Lela J. Beebe, secretary Yolo County Medical Society).

Yolo County Hospital, Woodland, 60 beds; Warden, L. H. Savage; county physician and medical director, Dr. H. D. Lawhead.

Woodland Sanitorium, Woodland, 47 beds; medical director, Dr. F. R. Fairchild; business manager, H. O. Cummings.

X-ray Laboratory at Woodland Sanitorium; radiography and radiotherapy, radium therapy also.

Children's Health Conferences at Woodland Sanitorium, infant and pre-school group, once weekly; school children, once weekly.

THE UNITED STATES SUPREME COURT AND CHIROPRACTORS

The United States Supreme Court decision which upheld the Medical Practice law of the State of Ohio requiring chiropractors, sanipractors and other drugless healers to be licensed, was met with the statement through the president of the Chiropractors' Association that they, the chiropractors, would "rot in jail" before the law would be obeyed.

It would seem that if these chiropractors, sanipractors and other drugless healers felt that their education would stand the test of investigation they would welcome regulation rather than oppose the state licensing boards.

The opinion of the United States Supreme Court was written by Justice Wanamaker in such forceful style as to make it a valuable contribution to health literature. The following quotation is an indication of the splendid material contained in this decision:

"Public health is the very heart of public happiness. The constitutional guarantees of life, liberty, and the pursuit of happiness are of little avail, unless there be clearly implied therefrom the further guarantee of safeguarding the public health, in order that life, liberty and the pursuit of happiness shall be made practical and plenary."

The court unquestionably was familiar with his subject and based his decision not only on knowledge of what should be required before authorizing the practice of any system of the healing art, but as well on the dictates of common sense when he said:

"It is surely only elementary to say that before one can treat a disease intelligently, he must know how much about the nature and extent of that disease, the organs and parts affected, and even the cause of that disease. The state should set its standards high, so as to abundantly protect the public from the mistaken ignorance, however well intended, from charlatanism, from professional quackery, however garbed in alluring advertisements, and from all those who would prostitute their profession to a profiteering basis. Manifestly before this scientific knowledge of the human body can be properly acquired, there must be some preliminary educational qualifications of a general nature. . . . It is absurd for anyone to say that you can develop and train a mere hodcarrier with comparatively no education to become a skilled physician or surgeon in the same time that you can a college man with the same natural endowments."

The court disagreed with the argument that chiropractic treatments were not harmful and that it should not be necessary for chiropractors to study and be examined in subjects not directly connected with the practice of medicine, which contention he answers in no uncertain terms by saying: "To say that such knowledge in no way pertains to the treatment of the chiropractor is sheerest nonsense, even to a layman."

In the last analysis, all residents are wards of the state. Taxes are paid, administrative officers are supported, departments organized to safeguard our homes and our lives that we may prosper. A community progresses only as the health of its people is advanced. The State, therefore, exercises a legitimate right in taking a forceful stand for the protection of health, the preservation of life and for the advancement of the standard of its citizenship. —Information Bureau, State Board of Medical Examiners.

BOOK REVIEWS

History and Bibliology of Anatomic Illustration in its relation to anatomic science and the graphic arts. By Ludwig Choulant. Translated and edited with notes and a bibliography by Mortimer Frank, B.S., M.D., 435 pages. Illustrated. Chicago: University of Chicago Press. 1920.

A beautiful translation of Choulant's book illustrated with many wonderful drawings of the ancient anatomists. The drawings of great artists, da Vinci, Rubens and others of their time who considered the human body less as a dissected specimen than as a living and moving handiwork of Nature, will make this work a delight to those who long for an occasional holiday from our card-catalogued and matter-of-fact surroundings.

L. E.

Life of Jacob Henle. By Victor Robinson. New York: Medical Life Company. 1920.

An interesting, rather sketchy, account of the life of Henle and his friends. As Henle had the faculty of making sincere and lasting friendships, there is about as much space devoted to the latter as to the former.

The book furnishes an hour or two of pleasant reading, and may serve to stimulate the interested to a more extended study of the life of one who is remembered now as an anatomist whose name is associated with several structures.

Whereas his early life had its share of romance, ranging from imprisonment to educating a serving maid to take her position as his wife, his later years were passed in the quiet of Gottingen in the midst of a devoted family and friends.

The last chapter, dealing with the contributions to science, though containing all the material, might be improved by an appended bibliography.

A. L. F.

Hayfever and Asthma—care, prevention and treatment. By William Scheppergrell, A. M., M. D. 274 pages. Illustrated with 107 engravings and 1 colored plate. Philadelphia and New York: Lea and Febiger. 1922. Price, $2.75.

The book is a concise treatise on the relation of hayfever to wind-borne pollens by one who has done much original work in this field. It should serve as a reference book for anyone treating hayfever. There are several tables giving the most frequently met hayfever plants in each State and their approximate dates of pollenation. Many illuminating points, not heretofore generally known, are brought to the reader's notice. The book is recommended to anyone interested in this malady, which affects about one per cent of our population.

J. M. R.

BOOKS RECEIVED

Ophthalmoscopy, Retinoscopy, and Refraction. By W. A. Fisher, M.D., Chicago, Professor of Ophthalmology, Chicago Eye, Ear, Nose, and Throat College; late Professor of Clinical Ophthalmology, University of Illinois. 248 illustrations. Published by W. A. Fisher, M. D., 31 North State Street, Chicago, Ill.

Physiology and Biochemistry in Modern Medicine. By J. J. R. MacLeod, M. B., Professor of Physiology in the University of Toronto; formerly Professor of Physiology in the Western Reserve University, Cleveland, Ohio. Assisted by Roy G. Pearce, A. C. Redfield, and N. B. Taylor and by others. Fourth edition. 243 illustrations, including nine plates in color. St. Louis, C. V. Mosby Company, 1922.

Physical Diagnosis. By W. D. Rose, M. D., Lecturer on Physical Diagnosis and Associate Professor of Medicine in the University of Arkansas. Third edition. 319 illustrations. St. Louis, C. V. Mosby Company, 1922.

The Elements of Scientific Psychology. By Knight Dunlap, Professor of Experimental Psychology in The Johns Hopkins University, Baltimore. Illustrated. St. Louis, C. V. Mosby Company, 1922.

Socialistic Tendencies in Medicine—In recent years, under cover of promoting the welfare of society or of some part of it, James A. Gardner, Buffalo (Journal A. M. A., August 12, 1922), states that many so-called reforms have been inaugurated which, in reality, are little more than the outcome of the emotional desires of restless faddists or of the ideas of extreme and radical discontents. The contention is sane that all reforms of whatever nature should be made only after patient and scientific investigation of the causes and the cure of the evil sought to be corrected, and that the desire to bring about such reforms presupposes knowledge obtained by serious investigation and careful research, unhampered by emotion or prejudice. The field of medicine has been a fertile one for the agitator and the propagandist. Reformers and uplifters have been allowed to invade, unopposed, the practice of medicine and surgery, until the time has arrived for raising the danger signals. The peril of the situation becomes more urgent when it is realized that the public is being educated to believe that the socialization of the medical profession will bring higher standards of health. The fact is that, with the initiative and individuality of the physician removed, the profession will cease to attract to it men of energy, ability and ambition, who are now keeping American medicine in the front rank of intellectual and scientific achievement. Prevention and education need the aid of the Government; but the State should not compete with individual skill and superior knowledge and efficiency in the care of those who have money to pay, and so should not be treated at public expense. Public health is the musical instrument easiest for the welfare worker to play, and the softest chord is the venereal problem. It is not wise for a State to pauperize its people, nor is it fair to the medical profession to deprive it of its legitimate livelihood. The physician has always been too busy looking after the needs of his patients to give much time to his own interest. Unless he awakens to the drift of the tide, there will soon be little inducement for a young man of real ability to enter the medical profession. The field of social welfare or social reform has developed to such an extent in recent years that it is now a recognized profession, remunerative and popular. The solution of this problem is suggested by Gardner under three heads: (1) There should be a social service, ably trained to make real and thorough investigations and competent to distinguish between the needy poor and those possessing the ability to pay. (2) There should be an awakening of the medical profession to the realization that it is equally responsible for this pauperization. There should be censorship of the services of the physician by some responsible body like the county medical society, as has been done in contract practice, so that patients able to pay should not be cared for gratuitously. (3) There should be education of the public to an understanding that if the standards of medicine are lowered through the loss of impetus and initiative in the young physician, the public will be the chief sufferer.

BUSINESS AND THE BUSY PHYSICIAN

Why not let our advertisers help you?

ABOUT THIS DEPARTMENT OF THE JOURNAL

The department of medical economics or the business of medicine was started in the Journal to touch lightly upon matters of organization and the business side of medicine. There is now one medical journal and several hospital journals devoting all of their space to this subject, and many other medical journals include occasional articles at various times.

We had in mind also to follow the usual custom and call attention to the offerings of our advertisers. Advertisements are the principal source of income of any publication. We can increase the usefulness of the Journal only by increasing the extent of its advertising. The Journal in its present size and form costs about $20,000 a year. Its income from advertising is now paying all of this expense.

In addition to this feature, the department has developed into a service, with specific inquiries about specific subjects from members in all parts of the State. The editor and other officers of the State society do not feel themselves competent to give financial advice, but reliable banks, trust companies, bond houses and insurance companies who are experts in financial matters are advertisers in the Journal. We believe they are interested in the welfare of the medical profession, and that they will give conscientious advice courteously and with pleasure to members of our organization. This number contains the advertisements of the Union Trust Company; San Francisco Savings and Loan Society; Anglo-California Trust Company; E. H. Rollins & Sons; Pacific Mutual Life Insurance Company.

Doctors and Investments—"The reason most doctors have so little money to invest in profitable ways is because they waste so much in 'wild cat' schemes. The doctor is the exemplification of the 'hayseed,' so dear to the heart of the bunco-man. It was estimated that more than a million dollars went out of a city of about forty thousand people, in the Southwest, in the Texas oil fields, in 1920—never to return. It is known certainly that at least fifty thousand dollars of this came out of the pockets of the doctors of that city. This against the advice of bankers and all well-informed and reputable financial representatives.

"In contrast, a doctor is known to us who says that he never invests in anything except bonds of banks or those recommended by reputable banks; this doctor recently retired from practice, at the age of forty-five, with sufficient income to support himself and wife for life.

"The lesson is plain. When you invest, know what you are purchasing. If you wish to gamble, play the races or sit in a poker game, losing what you can afford to lose. Your money to be invested can be invested safely. If you do not know the risks in a proposed investment, inquire of a reputable investment concern, who will give you the facts."—Editorial, Southern Medicine, October, 1922.

Insurance and Taxes—"I have come to the distinct conclusion that by far the best and, indeed, almost the only practical way of guarding against the possible ruinous loss by a forced sale of securities for the purpose of paying the various estate and inheritance taxes that are being imposed nowadays, both by the National and State Governments, is by means of life insurance which, for a moderate annual payment, will insure the sum necessary to pay such taxes without the sacrifice of the securities."—Elihu Root.

Life Insurance Examiners—There are life insurance companies doing business in California who place all of their medical work in the hands of members of the State Medical Society. There are others who do not.

MEDICINE IN THE PUBLIC PRESS

The public press is showing a constantly increasing interest in matters of public health, medical education and the practice of medicine. Whatever the opinion of physicians as to the quality of most of this publicity, we cannot fail to appreciate its far-reaching influence in molding public opinion and thus determining, in a measurable degree, medical progress. Some of the articles are along the right lines, but the vast majority are thinly veiled propaganda of the socialistic organizations, or they are promoting some selfish interest. It is believed that the attention of the readers of the Journal should be called to some of this literature with appropriate comments as to its real significance and possible influence. This will be done in this department from time to time.

Better Health Service—The articles from this service now appearing daily in the "San Francisco Examiner," the "Los Angeles Examiner," the "Seattle Post-Intelligencer' and shortly to appear in other papers, is the best example of the best method of enlightening the public upon questions of preventing and treating disease that has yet been devised. This service, which is furnished by the League for the Conservation of Public Health, is the only one anywhere that is supplied, edited and controlled by an organization of physicians. The articles are prepared by physicians, edited by a board of physicians and put out in the name of an organization of physicians. These articles now reach over one million readers and the possibilities for further development of the service are only limited by the interest of physicians in supplying interesting and instructive material presented in an attractive and accurate manner. If you are genuinely interested in making public enlightenment a fact and not a theory send in your articles.

Education by Correspondence—In answer to questions regarding the so-called American University and the teaching of medicine, nursing and similar professions by mail, we quote from a recent number of the New York State Journal of Medicine:

". . . Even our government postal department seems to find it impossible to stop the so-called extension courses of the so-called American University which under various names from a little suite in an office building in Chicago, with never a resident student so far as we can learn, has, for many years, conducted a profitable advertising business through the mails wherever English is spoken. Correspondence courses in Mechano-therapy, Suggestive-therapy, Spondylo-therapy Chiropractic, Osteopathy, Bust development, get-the-coin-therapy, with 'handsome diploma' are given for a scale of fee sliding from two hundred dollars down to whatever the victim can be induced to give. Thirteen years ago London Truth said: 'It passes my understanding how wealthy newspaper proprietors . . . can condescend to take money for foisting this sort of bunkum on their readers, but as long as they do so, cheap postage to America will certainly put money into some pockets,' and in describing the 'college' calls it 'a concern which proposes to give postal tuition in quackery to British fools.' The American Medical

Association Journal says: 'A description which can only be improved by the substitution of "English-speaking" for British!' When we saw the advertisement from the Police Gazette of July 1, 1922, that 'any one' could be taught, by correspondence from the 'American University' to become 'a doctor,' to earn 'from $3000 to $5000 yearly,' and to become 'a member of an honorable and respected profession,' we were shocked, both because we had not seen the seductive pink sheet very often since our country barber shop days, and because we had believed that such advertising violated our postal laws and had been suppressed. We are now convinced that it will go on as long as there are minute men, and one is born every minute, to respond to its call."

The Series of Articles Running in "Hearst's International Magazine"—This magazine is publishing a series of articles by Paul H. De Kruif which ought to be read by every physician because they are being widely read by thousands of other persons. Dr. De Kruif is publishing some unpleasant truths about the prevention and cure of disease and he is saying some things that most physicians will resent as being inaccurate and destructively critical rather than constructive. Norman Hapgood in the September number of "Hearst's International," which contains De Kruif's first article, says, editorially, regarding these articles:

"The doctor is present at birth and at death. He comes when the life of a dear child lies in the balance, and he consults with us about the recurrent headache. The difference in the home between an able family doctor and a quack (or semi-quack) may be a difference in happiness beyond estimate.

"The series, to which we publish this month the introduction, is of no use to those who wish the name of some pill, or some new medical nickname, by resort to which magic relief can be brought to heart-disease and hiccoughs, to erysipelas and earache, to corns and constipation. It is of no value to a fool. To those, however, who realize that the choice of a doctor is one of the most important of acts, and that medicine has exact technical bases, the series is indispensable.

"He who reads with a trifle better than moron attention the expert and varied articles in the series will see emerging clearly the principles that should guide an intelligent person through the maze of medicines and the delirium of fake doctors. Never have medicines been so many; of this multitude only a few mean anything. It is easy to know which ones are real.

"Among those who will gain most are earnest doctors, not themselves living in an atmosphere of research, who will be grateful to be shown how they also have fallen victims in a false drug traffic.

"Indeed, one of the ironies of this story is that what appears as progress sometimes is merely the new form of an old idea. In the brilliant campaign of fifteen years or so ago in which Samuel Hopkins Adams published his articles on 'The Great American Fraud,' there was dealt to the patent medicines a blow from which the effect remains. Selling to the public carbolic acid and water as a cure for consumption, carditis and cramps is not as easy as it was. But newer and subtler methods of fraud have taken the place of the earlier, cruder forms. The foremost frauds are now 'ethical.' That means they are advertised not direct to the public but in the medical press. Which makes this continued story a new tale, sad at once and diverting."

The second article of this series, in the October number, is devoted to the Vitamin Craze. If we judge reaction correctly the Vitamin Craze is already on the wane and we doubt very much whether De Kruif is doing more in this second article than tying the usual tin can to the dog's tail.

California Also—We still receive newspaper clippings from Elwood indicating that the name of one of the doctors there, president of the county medical society, appears in the daily papers every day or so in connection with a report of medical and surgical cases, and we have been asked by other doctors, "What is the State Medical Association going to do about it?" As a matter of fact, the State Medical Association will do nothing about it, for each county medical society is the judge as to the qualifications of its members, and not only approves but censors the conduct of its members. If the county medical society is satisfied that one of its members is so guilty of unprofessional conduct that he should be punished for the offense, then it is up to that county medical society to bring the offending member before the society to answer charges and receive such sentence as the majority of the members of the society may think indicated after the facts have been presented and properly analyzed.—Indiana Medical Journal, September 15, 1922.

Pauperizing Practices—The Physicians' Protective Association of Buffalo, made up of 450 of the 857 physicians in that city, is carrying on an energetic fight against the pauperization of the public through free medical services in local hospitals. Abuses are tolerated under the mask of public health, and the Buffalo physicians believe that it is time to put a stop to the practice of making dependents and paupers of people who are able to pay something for the services rendered. The question concerns the public more than it does the medical profession, for no community can afford to tolerate widespread and unnecessary pauperization of any kind of unnecessary free aid.—Indiana Medical Journal, September 15, 1922.

OBITUARY

WILLIAM STEWART HALSTED

With the death of Professor Halsted, surgery lost one of its great leaders. This philosopher-surgeon was ever intent on extending the bounds of medical knowledge, and devoted himself whole-heartedly to qualifying and enriching the minds of his many pupils. We are grateful for this legacy, which he so bountifully distributed during his lifetime, "teaching what he had learned, and learning in order that he might teach."

We glory in his tireless energy, his quiet, simple and unostentatious manner, and in the splendid accomplishment of his many tasks. He was truly a great man, a daring and brilliant pioneer of surgery, and his single-hearted and self-sacrificing devotion to the cause of scientific research had its reward in achievements of the most vital and far-reaching nature.

DEATHS

MacAulay, Sarah Hatton. Died at Monterey, Calif., Sept. 17, 1922. She was a graduate of Hahnemann Med. Coll. of the Pacific, 1904. Wife of Dr. Martin MacAulay.

Cross, Harry N. Died August 18, 1922, aged 55. Graduate of Cooper Medical College, 1889. Member of San Joaquin County Medical Society.

Merryman, Thomas J. Died at Whittier, August 21, 1922, aged 77. Graduate of Hahnemann Med. Coll. and Hosp. of Chicago, 1868.

California State Journal of Medicine

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ORIGINAL ARTICLES

RESPONSIBILITY FOR STATEMENTS AND CONCLUSIONS IN ORIGINAL ARTICLES

The author of an article appearing in the JOURNAL *is entirely responsible for all statements and conclusions. These may or may not be in harmony with the views of the editorial staff. Furthermore, authors are largely responsible for the language and method of presenting their subjects. All manuscripts will be carefully read, but editorial privileges will be exercised only to a very limited extent. It is believed that the manner of presentation of any subject by any author determines to no small degree the value of his conclusions. Therefore, both the author and the reader, in our opinion, are entitled to have the subject as presented by the author as little disturbed as possible by the editors. However, the right to reduce or reject any article is always reserved.*

SPEECH DEVELOPMENT IN ORTHOPAEDIC CASES *

By CHARLES G. STIVERS, M. D., Los Angeles, Calif.

The modern conception of orthopaedics, the development of perfect children, is far removed from the old idea of the correction of club-feet and other gross deformities. I have been associated with a group of orthopaedic surgeons for several years working out problems that presented themselves. One of these was the development of the language faculty, not only for its use as a means of expression, but also as one of the psychomotor trainings. It has been discovered that speech and language drill exercise the faculties of inhibition, concentration and attention, memory, co-ordination and other faculties by reason of the psychological precept, that the exercising of one mental faculty through association develops others and is a useful part of the general orthopaedic supervision of a crippled child.

The long period of convalescence after operation while wearing casts and braces need not be a period of mental inactivity. On the contrary, this period is utilized by us to develop the mental as well as the physical body. I have published elsewhere ("Systematic Training in the Treatment of Inco-ordinations, Especially of Speech") a comprehensive study of all the psychological factors entering into this subject and it is not necessary to go into that phase fully here. Suffice it to say that our procedures are founded upon sound psychology, and as we advance in the work, confirmation of our expectations is evidenced by improvement in both the mental and the physical bodies. A recent study of the voice and speech among the crippled children admitted to the Orthopaedic Hospital-School of Los Angeles in the four years from 1918 to 1921, inclusive, revealed the fact that nearly 10 per cent also had some speech defect.

It is a clinical fact that defectives usually show more than one deficiency. A large proportion of physically handicapped children show the tendency to two or more departures from the normal; for instance, there is often a cleft palate with a hare lip or a spina bifida or extra fingers or toes or extrophy of the bladder, club-feet and other physical handicaps often occur in children of subnormal mentality, etc. We are not surprised, therefore, to find a large proportion of the physically handicapped with speech defects.

Remember that motor areas control leg, arm, fingers, tongue, lips and cheeks, all parts of the expressional, gestural and motor faculties. We can easily comprehend how injuries to the head at birth could traumatize any part of this motor area and be followed by a failure to develop vocal expression, a motor as well as sensory faculty, besides various paralyses of the arms and legs. In general terms any pathological process whether inflammation (intracranial or intraspinal) at or after birth or traumatism resulting in actual loss of nerve substance, the formation of cysts, cicatricial bands or pacchy-meningitis destroying the integrity of the motor or sensory areas of the brain, including those governing speech, may result either in lack of sensory perception of the spoken or written word or failure to develop speech either written or spoken or both.

Speech supposes co-ordination; if brain areas governing balance, rhythm, orientation, time and space preception are injured then speech development and production will suffer.

Defective speech development or production is found most commonly in cerebral spastic palsy, inco-ordinations, ataxias, cerebro-spinal inflammation and in mentally subnormal children. In these cases treated at the Orthopaedic Hospital-School it has been a fundamental principle of treatment that the speech education or development or drill was an essential part of the treat-

* Read before the California State Medical Association, May 17, 1922, at Yosemite Park, in connection with the film, "Development of Speech in Orthopaedic Cases."

ment of a general motor paralysis. In cases of paralysis of the arms and legs, speech drill is considered to have a beneficial action through association fibers reaching other brain centers. A spastic paralysis child of 2 to 10 years of age with hyper-acting arms and legs, drooling saliva constantly, whose muscular and nervous system is filled with fatigue toxins, should first of all have the endocrine balance investigated and suitable medication and diet prescribed. Rest is of the utmost importance and to secure it the arms and legs are placed in casts or braces after such operations as may be decided upon to secure motor function in the future.

I found in a recent study of all the admissions to the Orthopaedic Hospital-School in Los Angeles during 1918-19-20-21 that out of the 1044 cases there were eighty-two cases with a speech defect in addition to their orthopaedic troubles. These cases were found in spastics, inco-ordinations, ataxias, polio-encephalitis and faulty postures. Normal children of school age show from 1 to 2 per cent of speech defects (Gutzman and others). Crippled children of Los Angeles showed nearly 8 per cent of speech defects, an example of the well-known fact that individuals with one developmental defect, in the motor or expressional system, are apt to show other defects; for example, cleft palate, hare lip, etc.

Birth injuries resulting in motor paralysis of one or all of the limbs often include damage to the motor speech centers in the cortex and probably to the central nuclei, the caudate lenticular and red and optic thalami with disturbance of co-ordination and rhythm in the speech mechanism.

Remembering that speech is motorized thought and that gesture is the primitive speech racially, we realize how impossible it is for a case of muscular inco-ordination or paralysis of the arms and legs to develop that stage of seemingly purposeless muscular activity with cooing and babbling that comes about the seventh to twelfth month or just previous to the development of the spoken word. The crippled child probably cannot lay the foundation for gestures or spoken words or written speech (O'Shea — "Linguistic Development and Education").

In health every muscle movement is registered in the muscle memory centers of the brain. Muscle movements spring from previously registered memories and no voluntary or conscious muscle effort is conceivable without the aid of this already stored memory (Goddard). Normal children (non-cripples) with normal motor ability, have placed in their brains through countless repetitions an adequate supply of perfect muscle memories. These can be used at will for perfect speech or gesture or for walking or dancing or performing any other motor acts.

The paralyzed or inco-ordinating or spastic child or one with some grave nervous degeneration affecting the motor apparatus, who has uncontrolled, hyper-acting gestures or motor function or no purposive movements or no speech or imperfect speech, has of necessity stored in his brain by these imperfect muscular acts, only imperfect muscle memories. Muscles are not simply means of moving bones and joints, but are living, moving impression centers from which come many of our most valuable lessons concerning the external world. Speech in a non-crippled child develops after a cooing, seemingly purposeless, bilateral movement period. In crippled children there may be no such pre-speech period and when the child's desire for expression has grown to a point where it demands motion or action, there are no trained co-ordinated memories stored ready for utilization as the foundation of the spoken word.

The development of speech in crippled children where speech does not exist is a problem to be approached by the entire staff of an orthopaedic hospital.

The child of whatever age is put through a most searching examination as to diet, habits, measurements, etc. The orthopaedic surgeons correct the faulty conditions that can be remedied by various operations followed by casts, braces and appliances. In the spastic child as soon as it begins to develop quietness, when the hyper-acting arms and legs are calmed, the speech drill is begun. This is carried on at the same time as the general muscular exercises and usually in a reclining position. Breathing exercises, vowel sounds, counting, and one syllable words with games, simple bright colored objects, pictures (cut out of magazines and books) of animals and familiar objects, keeping everything well within the comprehension of the child, with arm movements are used. The arm and leg exercises follow a definite plan of using groups of muscles opposed to those that are hyper-acting or contracted. In a spastic with a tendency to adduction and inward rotation, the movements are outward, upward and backward.

In cases of inco-ordination listening to music, beating time, reciting rhymes and games (bean porridge hot, etc.) is used.

The language ability is stressed at all times by making the exercise a form of game in all cases except those with hyper-acting muscular systems (spastics). All excitement is avoided in these cases.

Speech training alone as a biological necessity in the utilization of muscular co-ordination to express emotion, does several definite things for crippled children:

First, it correlates muscular activity with mental images in the expression of emotion.

Second, it develops association paths in the brain.

Third, it increases breathing power, with more oxygen, better blood and better voice.

Fourth, it develops control (inhibition) of the purposeless, energy-wasting muscular movements.

Fifth, it strengthens and co-ordinates muscles of the tongue and cheeks and assists in the cure of drooling.

Sixth, linking gesture and other motor expressions of emotion to speech drill, improves the nutrition and strength of all the muscle systems used in the exercises.

(406 Auditorium Bldg., Los Angeles.)

FURTHER EXPERIENCES IN SACRAL ANESTHESIA IN UROLOGY *

By ALBERT J. SCHOLL, Jr., M. D.
Fellow in Urology
The Mayo Foundation, Rochester, Minnesota

The anatomic structure of the sacrum, in which all the lateral foramina communicate with the main central canal, favors the distribution of fluid introduced through any of the openings. The sacrum is covered only by a thin layer of subcutaneous tissue and the openings are readily located by means of prominent landmarks and in most cases are easily entered.

There are two common methods of anesthetizing the sacral nerves, one by merely injecting novocain solution into the main central canal through the caudal foramen, and the other by individual injection of each nerve as it leaves the lateral sacral foramen. The caudal injection is satisfactory for most operations on the perineum or external genitalia, and for practically all endovesical procedures. After making a single caudal injection it is necessary to wait twenty minutes before complete anesthesia occurs. It has the further disadvantage of failing to induce complete anesthesia in from 10 to 15 per cent of the cases. If the lateral nerves are injected individually there is an almost immediate anesthesia of the area involved and failures are unusual. It is much more difficult to inject the nerves as they leave the canal than to make the single caudal injection, and the contact of the needle against the periosteum, or the occasional striking of the nerve, causes the patient pain.

Both methods of injection are best carried out with the patient lying on his abdomen. The caudal injection is a suitable office procedure; it incapacitates the patient only during the period of the examination, and is generally not suited for extensive cutting operations. The anesthesia varies in duration; the period of maximal intensity in most cases is about sixty minutes. The patient is placed on the table face downward, the dorsal and lumbar spine is slightly elevated above the sacrum so that the injected fluid will remain in the region of the sacral nerves. The sacral hiatus is located at the lower end of the sacrum as an elastic depression at the sacrococcygeal joint. In most cases it is triangular in shape; the lower two angles are bounded by the cornu of the incompletely fused fifth sacral vertebra. The skin is anesthetized over the ligament, a thin spinal needle held at right angles to the skin is then inserted through the skin and ligaments (Fig. 1). A definite crunch is felt as the needle passes through the ligament. The point of the needle is then directed up the canal which it should enter readily. The needle may strike the lateral wall or the point may become buried beneath the periosteum; slight withdrawal and redirection of the point will in most cases permit insertion for a sufficient distance, about two to four cm. It is possible to enter most canals, although occasionally an ossified membrane is encountered. In some instances the canal cannot be located, or the anterior posterior diameter is too small to permit the entrance of the needle. Not infrequently the needle enters one of the sacral veins and on withdrawal of the stylet a few drops of blood appear. The needle should then be partially withdrawn and the point redirected. If blood flows freely from the needle, the injection should be abandoned; if a portion of the injected solution is absorbed through a tear or large puncture in the vein, symptoms of toxemia are likely to appear immediately and the resulting anesthesia will be unsatisfactory.

There is always the possibility that the needle will enter the dural sac, and this will be indicated by the appearance of spinal fluid when the stylet is withdrawn from the needle (Figs. 2 and 3). The needle is generally inserted only two or three cm. and it is only in the exceptional case that

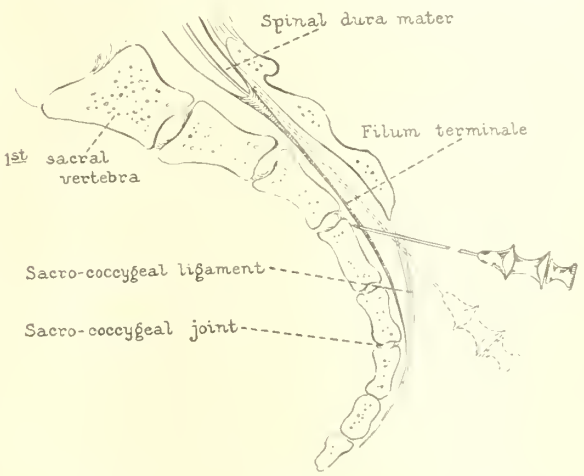

Fig. 1
Section through sacrum, showing relation of needle to sacral canal and dural sac.

the dural sac reaches to within four or five cm. of the sacral ligament. In one case the dural sac was punctured after the needle had entered the canal only two cm. If spinal fluid appears, the needle should be withdrawn until the flow stops before the injection is made.

Novocain solution is prepared fresh for each case. Thirty cubic centimeters of a 2 per cent solution of novocain bicarbonate solution is used in most cases. In children, or in adults with reduced vitality, the dose is diminished. The most satisfactory results have been obtained from Metz novocain; it is kept in powders with enough soda bicarbonate to make 30 cc. of a 2 per cent solution; sodium bicarbonate 0.15 gm., sodium chloride 0.1 gm., and novocain 0.6 gm. The powders will remain fresh for from ten to twelve days, after which they lose strength, and when injected may cause mild symptoms of toxemia. As suggested by Brock of the Mayo Foundation, if the novocain is kept separated from the bicarbonate until ready for use the powders do not deteriorate so readily.

The addition of sodium bicarbonate to novocain gives a solution which diffuses more readily through the nerve sheaths; the anesthesia is generally of a greater intensity, and the possibility of

* Presented before the California State Medical Society, Yosemite Valley, May, 1922.

a failure is less than when novocain alone is used. The powder is dropped into 30 cc. of boiling distilled water and the solution removed from the flame. After the solution cools several drops of 1:1000 epinephrin are added. In certain cases the epinephrin produces a mild reaction; the patient complains of a feeling of suffocation and increased heart action. On this account only small amounts of epinephrin are added. The solution should be injected slowly, three or four minutes being taken for the injection of 33 cc. The fluid should meet with little resistance; if force is required, the needle probably is not in the open sacral canal and should be readjusted. After the injection the patient assumes the sitting posture in order to retain the fluid in the sacrum. Anesthesia of the sacral nerves first appears in about ten minutes and reaches its maximal intensity in from twenty to thirty minutes.

Caudal injections, similar to spinal anesthesia, give complete relaxation of the structures supplied by sacral nerves. There is paralysis of the reflex arc, causing muscular relaxation that is greater than can be obtained with general anesthesia; at the same time the co-operation of the patient may be obtained. Sacral anesthesia differs from spinal anesthesia in not necessitating hospitalization of the patient; the risk attached to local blocking is practically nil, and is not followed by the undesirable after-effects which so often accompany spinal anesthesia.

Caudal injections give very satisfactory anesthesias for urologic examinations and treatment. The wall of the bladder is completely relaxed and the bladder thus distended. Such relaxation with absence of pain and straining, permits the operator to carry out a thorough, unhurried examination of the bladder and ureters. In none of the patients examined in this manner in the Mayo Clinic have there been undesirable after-effects. The injection may be repeated if necessary. In certain types of cases, such as severe cystitis and pyelonephritis, caudal injections have been given in order to facilitate lavage of the renal pelvis. In one case ten injections were given in seven weeks. The reaction following cystoscopy in severe cases of cystitis is not uncommonly due to voluntary muscle spasm around the cystoscope, especially in the region of the neck of the bladder; this does not occur after sacral anesthesia. In a number of patients with pyelonephritis and severe cystitis who were given periodic renal lavage, treatments were first carried out under caudal anesthesia and later merely with urethral cocainization, the convalescence in these cases was invariably much smoother and easier when caudal anesthesia was used. In several instances, patients refused to submit to cystoscopy without caudal anesthesia.

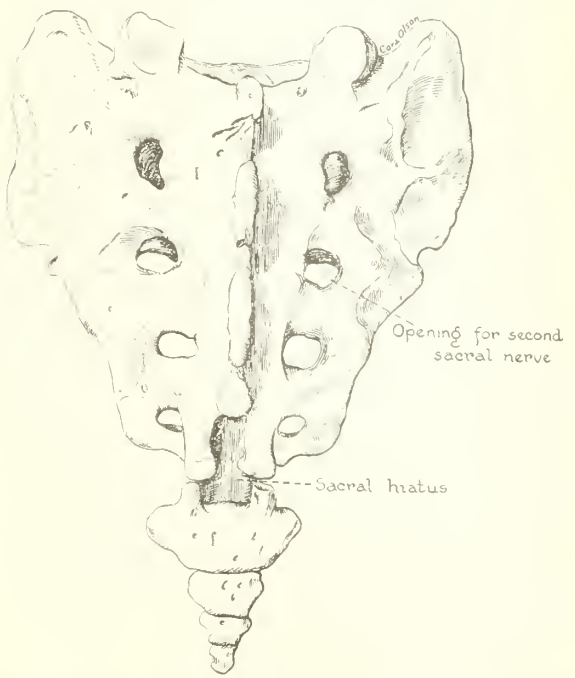

Fig. 2
Relation of sacral foramina and caudal opening to the bony landmarks of the sacrum

TABLE I.
Results of anesthesia

	Cases	Satisfactory	Failures
Introduction of radium needles through perineum into cancerous prostates...	74	69	5
Transvesical treatment of bladder tumors			
Fulguration	20	20	
Radium emanations	16	16	
Urethral operations	15	14	1
Litholopaxy	21	20	1
Manipulation of ureteral stones	31	31	
Prostatic punch	9	9	
Cystoscopic examination—			
Tuberculous cystitis	63	61	2
Malignant cystitis	48	44	4
Alkali phosphate cystitis	6	6	
Cystitis of pyelonephritis	77	70	7
Irritable bladders	10	9	1
Submucous ulcer	2	2	
Impossible to enter caudal foramen			8
	400	373	27

DISCUSSION

Failures result from various causes. In some patients it is impossible to enter the canal; this generally occurs in patients with small sacrums, in those with marked hypertrophic arthritis, or with old traumatically distorted pelves. Traumatic distortions of the sacrum are not uncommonly seen in conjunction with old traumatic urethral strictures. Patients with occult spina bifida often have deformed sacral foramina and even if the canal is entered the anesthesia may be deficient. In certain cases of malignancy of the bladder there is an extension of the growth through the wall of the bladder to outside structures not anesthetized by the sacral nerves. In one case failure resulted from an extension of the growth into the sacrum which blocked the sacral canal. The majority of failures are due to errors in technic, or to poor solutions. Four of the failures in this series occurred on the same day and were due to the use of old powders.

Caudal anesthesia is very satisfactory for the examination of infected bladders. Tuberculous bladders which hold only 20 or 30 c. c. of fluid may be distended sufficiently to permit complete examination with catheterization of the ureters without discomfort to the patient.

In malignant bladders a thorough examination of the growth, with the removal of a specimen for histologic study, may be carried out. The growth may be extensively fulgurated over a long period, or radium may be planted in the growth without the patient being aware of the manipulation.

In the cases of litholopaxy a number of patients had large stones removed which required more than an hour of crushing and washing.

One of the most satisfactory features of caudal anesthesia is its almost complete absence of postoperative sequelae. Several patients complained of

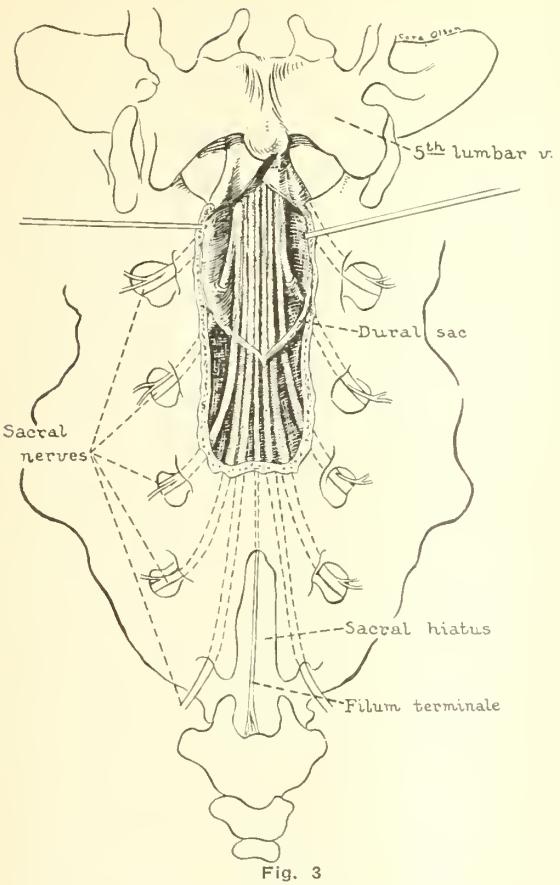

Fig. 3
Showing relation of dural sac to the sacral canal, nerves and sacral ligament

nausea and two lost consciousness for several minutes. One patient developed a definite psychosis following the injection which lasted about thirty minutes. Transient sensations of faintness and forceful and increased heart beat were occasionally seen. In no case were delayed or prolonged after-effects observed, and in none was there indication of paralysis of the anesthetized nerves after the general effects of the anesthesia had receded.

Caudal anesthesia gives an excellent relaxation of the lower ureter, and permits the manipulation of ureteral stone; in some cases several large ureteral catheters may be readily inserted to the site of the stone without causing the patient discomfort. Occasionally there is relaxation of the lower ureteral segment and spasm of the upper ureter which causes an impassable angulation.

Sacral anesthesia is simply and easily carried out. It causes very little discomfort to the patient, gives a satisfactory working anesthesia, and rarely produces undesirable after-effects.

Provisions of Sheppard-Towner Act Rejected by Five States—"During the summer the State of Maine, through the action of Governor Baxter and his Council, and the State of Louisiana, through the action of its Legislature, rejected the provisions of the Sheppard-Towner Act. Thus, five States have made definite rejection of Federal aid offered through that Act. Most of the State Legislatures will meet in January, 1923, and final action will be taken by those bodies on this matter in the States where the Legislatures have not already accepted or rejected the provisions of the Federal maternity and infancy law, through which the national Government offers financial aid to States which will carry out a program approved by a Government board."—A. M. A. Bulletin.

INTRATRACHEAL INSUFFLATION ANAESTHESIA*

By MARY KAVANAGH, M. D., San Francisco
Instructor of Anesthesia, University of California Hospital, San Francisco

One of the greatest dangers of intrathoracic operations is the occurrence of pneumothorax as soon as the pleural cavity is opened. This, when limited to one side, while not fatal, always causes more or less serious respiratory embarrassment. When both cavities are opened the result is generally fatal. As it not infrequently occurs in operations upon one side of the thorax that the opposite lung is more or less incapacitated as a result of injury or disease, the desirability of avoiding the serious consequences of pneumothorax has long been appreciated.

The word *pneumothorax* was coined in 1803 by Itard, a French physician. The condition it describes barred for practically one hundred years the chest cavity to the knife. Modern thoracic surgery dates from 1896, when Quénu first made known the idea of restoring in pneumothorax artificially by differential air pressure the disturbed equilibrium of the lung, and Tuffier advocated the use of insufflation for the performance without pneumothorax of operations requiring the incision of the pleura. Quénu's apparatus was constructed on the lines of a diver's helmet in which the head of the patient was placed with a sponge saturated in chloroform. The air in the helmet was compressed and the pleural cavity opened. Tuffier introduced a narrow, slightly curved copper tube into the larynx and trachea. Matas of New Orleans was the first in the United States to become interested in thoracic surgery. He introduced the *Feel-O-Dwyer* type of apparatus for artificial respiration. The anaesthetic was given by means of a funnel attached to a T-tube. The main tube was introduced into the larynx and trachea. In 1898 Parham of New Orleans used the Matas apparatus in performing a resection for tumor of the bony wall of the chest—the first thoracic operation of record in this country. In 1903 the Sauerbruch cabinet was invented; and 1904 marks the real beginning of thoracic surgery by the transpleural route. For its performance Sauerbruch had built a chamber of about five hundred cubic feet contents, constructed of iron and glass, inside of which the operation is performed. Over the opened pleural cavity the air pressure is reduced below atmospheric pressure, while the patient, whose head is passed through an opening in the wall, breathes in atmospheric pressure. In quick succession, chambers were built in Berlin, Cologne, Vienna, St. Petersburg, and other places in Europe. Size of the chambers averages about six hundred cubic feet contents; the largest one at Vienna contains about 750 cubic feet. Their height is usually seven feet six inches.

The reverse proposition was also taken up by Sauerbruch, and after him Peterson, and Engelken constructed positive differential pressure cabinets, Peterson of wood and Engelken of iron and glass;

* Presented to the Pacific Coast Association of Anesthetists, May 16, 1922.

boxes of about fifty cubic feet contents, into which the head of the patient is passed through an opening in the side wall. The inside air pressure is then raised above atmospheric pressure. The patient breathes compressed air, while outside of the cabinet the pleural cavity is opened in atmospheric pressure. The anaesthetic in operations with these chambers and cabinets is applied in the ordinary way—with ordinary face mask and ether by the drop method. The anaesthetist frequently became partially anaesthetized. The construction of these chambers and cabinets was such that the surgeon could not see the head of the patient, and the anaesthetist could not follow the operation. Telephones were then installed, but the open air-pipes connecting the pump cylinder with the chamber or the cabinet made of the latter practically a part of the pump cylinder, in which the clicking of the valves, the hissing noise of the air in the air-pipes, and the boiling of the air through the water valve combined to make such a noise that the telephone was inaudible. Ventilation was deficient, the air being renewed only once in ten or fifteen minutes. The anaesthetist's attention was taken from the patient to regulate the pressure and other duties, which should have been done by others.

These inconveniences were avoided in the positive differential pressure apparatus of Bauer. The head of the patient is enclosed in an air-tight box about five cubic feet contents, in which the air is changed from four to five times every minute. The anaesthetic is applied by mask in the ordinary way. Openings are provided in the side of the box, through which the hands and arms of the anaesthetist are introduced, and then made air-tight by means of rubber gloves fastened inside of the box. It is thus from the outside that the anaesthetist applies the anaesthetic and manipulates the head of the patient, which he sees before him below a pane of glass. In 1907 Green and Janeway had constructed a positive pressure apparatus of the Bauer type, but modified and improved as to the valve action and mechanical appliances for artificial respiration during anaesthesia. In 1908 Willy Meyer's Positive Pressure Cabinet appeared. A cabinet of about eighty cubic feet contents, large enough for two anaesthetists, was built of wire screens and made air-tight from the inside by means of a bag of rubber sheeting, through which conversation between surgeon and anaesthetist can be carried on. The anaesthetists within are placed in a current of fresh air; the exhaust is near the head of the patient, so that the vapors of the narcotic are absorbed by the patient only. The air is changed once every minute. Outside, against one side of the cabinet and projecting far out from the same, a pyramidal box was placed opening inward and closed in front by a rubber collar through which the head of the patient is passed. The bottom of this head-box is horizontal, and serves to carry an adjustable support for the patient's head, offering besides room for instruments, etc. The top of the box pitches downward and consists of a large pane of glass, below which the patient's head can be seen from the outside. Above the pane is placed a mirror in which the anaesthetists, glancing up, see the field of operation reflected. The cabinet has an air-lock by means of which the anaesthetists can be reached without interruption of the difference in pressure. There is room inside for oxygen-tanks and for apparatus for applying the anaesthetic. The anaesthetists have access to the head of the patient, with plenty of room all around the same for carrying on whatever manipulations are required during anaesthesia. Lately, the inside covering of rubber sheeting has been replaced by copper sheeting, and the use of rubber sheeting been restricted to sound-windows for conversation between surgeon and anaesthetist in the two vertical sides of the head-box. Another sound-window is arranged in the copper near the pressure valve for conversation between anaesthetist and the mechanic. Later, the opening in the wall for passing the patient's head into the open air was omitted. Instead, the patient's head is placed in a positive differential pressure cabinet erected within the negative chamber. The size of the latter has been increased to approximately one thousand cubic feet contents (16 x 8 x 8). When the patient's head is in the positive cabinet, his body rests in the negative chamber on the operating-table in front of the positive cabinet. The air supply is so apportioned that the pressure within the cabinet, as well as within the chamber, responds immediately to the slightest change in the setting of the valves. By opening or closing these valves differences in pressure are produced, the extent of which is read on the gauge. Using the gauge as guide, the valve can, therefore, be handled in such a way that the pressure rises and falls between limits determined by the surgeon.

Reduction in the size of cabinets from six hundred to fifty cubic feet contents, and from fifty to five cubic feet proved that cabinets could be dispensed with. Its place has been taken by the mask and intubation tubes and an apparatus forcing ether vapor through the same. Of the mask type are the apparatus of Brat-Schmieden and of Tiegel. In both the drop method is used, in combination with an oxygen tank, the oxygen stream carrying the anaesthetic to the lung. The pressure in the lung is maintained by expiring against either a spring valve (Schmieden) or a water column (Tiegel). The intubation type is the apparatus of Kuhn. A tube is introduced into the trachea and compressed air is mixed with ether vapor blown through the same into the lung.

In 1908 experiments to overcome the deleterious effects of pneumothorax in operations upon the thoracic viscera were started. The experiments mainly followed two plans:

First. To increase the air pressure within the bronchial tubes and thus prevent a collapse of the lung when the negative pressure on the surface of the lung is removed by opening and admitting air to the pleura.

Second. To diminish the atmospheric pressure on the exterior of the lung when the chest is

opened, while maintaining the normal pressure of the air entering the trachea.

Experiments with the first method have generally been carried out by means of a snugly fitting tracheal cannula or intubation tube and some form of an air-pump or bellows.

Experiments by the second method—by placing the animal's body below the neck in an hermetically sealed chamber from which a certain amount of air has been drawn. This was the Sauerbruch cabinet, the then most satisfactory negative pressure apparatus. When sufficient air is withdrawn to render the negative pressure equal to 10 or 12 cm. of mercury it was found that in opening both pleural cavities the lungs did not collapse, but respiration continued without the slightest embarrassment.

F. T. Murphy of Boston has devised an airtight helmet which incloses the patient's head and neck, and in which the air pressure is increased and maintained by water displacement. Since that time experimental work has been towards employment of methods of positive intratracheal pressure rather than those utilizing negative pressure as in the Sauerbruch cabinet. Then came the Tiegel positive pressure apparatus and next came a portable positive pressure cabinet of Janeway and Green. Many others worked along these lines, but it remained for Auer and Meltzer to perfect and popularize the intratracheal anaesthesia. This is the method of introducing in the trachea a flexible tube, the diameter of which is much smaller than the lumen of the trachea, and they established the facts that pulmonary ventilation might be maintained by a constant stream of air or oxygen, under definite pressure being blown in the trachea and which returns along the space between the tube and the wall of the trachea and escapes through the mouth and nose. This insured the proper oxygenation of the blood, inflation of the lungs, favored the continuance of cardiovascular circulation, and permitted the induction of narcosis by means of a volatile anaesthetic. The result is an ideal anaesthesia because the dosage can be accurately adjusted, and by this means adequate and efficient respiration can be carried on, when, for any reason, the normal respiratory mechanism is embarrassed or fails completely. The embarrassment caused by spasm of the glottis, accumulation of mucus in the pharynx, and the dropping backward of the tongue are entirely avoided, and the demonstrated impossibility of foreign substance present in the mouth or pharynx entering the trachea or bronchi.

The Auer-Meltzer is a comparatively simple apparatus, and it abolishes the cumbersome uncertain appliances of the past and opens the thorax to the progress of surgery. The work of Auer and Meltzer, Elsberg, Flint and others has proved that intratracheal anaesthesia is not only a successful solution of an important phase of intrathoracic surgery, but is a safe adventure.

In 1912 Saxton Pope of San Francisco constructed an apparatus involving the Auer and Meltzer theory. Its principal features are compactness, a means of the accurate regulation of the proportion of ether and air given, electric heating to volatilize the ether and a pressure and safety valve attachments. This apparatus has been used for intratracheal anaesthesia with the most satisfying results.

To develop the technique of this form of anaesthesia I gave a series of intratracheal anaesthetics in 1913 to forty-two cases in general surgery. Since then I have had for intracheal anaesthesia the following cases: Mediastinal tumor, 4; carcinoma of mouth, 1; carcinoma of larynx, 3; carcinoma of tongue, 3; carcinoma of esophagus, 4; sarcoma of jaw, 1; carcinoma of cheek, 1; carcinoma of lip, 2; tracheoplasty, 2; diaphragmatic hernia, 1.

The technique for intratracheal anaesthesia is as follows: The patient is thoroughly anaesthetized by the gas and ether sequence. Buccal or nasal anaesthesia is continued to maintain anaesthesia during the stage of introducing the laryngeal catheter. The side-mouth gag is inserted. The first and second finger of the right hand are put well down the throat, the epiglottis located and pushed well forward; then the introducer loaded with the disconnected catheter (a No. 21 or No. 22 French catheter) is passed along the finger into the rima glottidis. As soon as the catheter is in the trachea you realize the fact by the hissing of the air in the tube on respiration of the patient, or by coughing of the patient, who is lightly anaesthetized. This is not an easy procedure, as the catheter may be inserted in the esophagus more readily than into the trachea. When the tube is in place it is then pushed down a distance of 25 or 30 centimeters from the teeth, and the introducer slipped off. Then the connection is made with the machine for intratracheal anaesthesia. A far better method of introducing the catheter is by means of the laryngoscope.

Some of the patients complained of sore throat after recovery from the anaesthesia, some had laryngitis, but this was due more to the unsuccessful attempts at intubation than the irritation of the tube in place. No case developed pneumonia. The tracheal tube is left in until breathing is good and coughing warns us of the return of the laryngeal reflex. At the end of an operation the patient can be roused within two to five minutes by giving straight air.

Continuing the history of intratracheal anaesthesia, we find the group of cases in which intratracheal anaesthesia has been found to be so highly advantageous is very limited, and that the Meltzer method has been supplanted by the pharyngeal method of Connell. Pharyngeal insufflation has supplanted intratracheal in all operations, even those requiring positive pressure for intratracheal work—except in such cases where collapse of the trachea is threatened—and eliminates the most serious complication of intratracheal anaesthesia, oedema of the epiglottis.

The apparatus illustrated is a modification of Pope's original apparatus, and following the suggestions of Dr. Sheldon, a member of the house staff, I now possess a practically noiseless motor which he devised.

(University of California Hospital).

BOWEL OBSTRUCTION FOLLOWING OPERATIONS OCCURRING DURING CONVALESCING PERIOD *

By ALANSON WEEKS, M. D., and
LEROY BROOKS, M. D.
(From the Department of Surgery, University of California Medical School, St. Luke's Hospital).

The menace of bowel obstruction following an abdominal operation is constantly with us. We have had personal experience with bowel obstruction following the simplest types of work in the peritoneal cavity.

The cause of death in these patients is a most interesting phase of the subject. The amazingly painstaking experimental work of men in the laboratory such as Whipple, Bacon, Anslow and Eppler, of Hartwell and Hoguet, and of Alvarez and Ellis has aided the surgeon in reducing the mortality. Still far too many of these cases end fatally and it is relatively unimportant to the practical surgeon whether the toxemia is due to a toxin from the intestinal mucosa or from intestinal contents, or whether it is due to shock or to dehydration, unless it points a way to relief. Surgeons have known since Kocher's early work that the intestinal contents in patients suffering from obstruction are toxic and all of them have practiced repeated gastric lavage.

The work of the men mentioned above has taught the clinical men that the toxic contents of the obstructed bowel tends to accumulate in the upper intestine and enterostomies are now done in this portion of the gut. However, the mortality rate is appalling and will continue to remain high until means are developed which will aid in making an early, certain diagnosis. Whipple and his co-workers lay stress upon the increase of the nonprotein nitrogen of the blood as a prognostic sign, while Bacon, Anslow and Eppler claim to have shown that this increase is due entirely to dehydration.

We recognize functional and mechanical obstruction following operation, and the life of the patient depends upon the rapidity with which we are able to diagnose the mechanical type. We must admit a functional foundation for intestinal paralysis. For instance, the organism in self-protection in the event of peritonitis puts the bowel at rest; also we meet paralytic ileus in other overwhelming toxemias where the peritoneum is not involved. Whether this is due to stimulation of the sympathetic nervous system or disturbance in the normal intestinal gradients is still an open question. Probably both have an influence.

We have seen an ileus in a patient with a large crushing injury to the thigh with profound toxemia, and autopsy showed the peritoneum, the intestine, and the mesentery free from inflammation. Similar findings are not at all uncommon in pneumonias.

We are reminded of one patient in whom we resected the cecum and part of the ascending colon with an end to end anastomosis for cancer, who developed an ileus as nearly as could be observed shortly after the operation. The patient was not in shock upon leaving the operating room. She failed to be relieved by liberal administration of fluids both subcutaneously and intravenously, repeated gastric lavage, and even opening of a presenting loop of intestine with irrigation did not prevent a fatality. This had to be recognized as functional paralysis because at autopsy the field of operation was entirely walled off from the general cavity, there was no general peritonitis, and the anastomosis was patent, but the whole small bowel was enormously dilated.

Another patient with a bullet wound of the abdomen rode forty miles in an automobile and was operated upon ten hours after the accident. A loop of the jejunum was perforated four times and the descending colon twice. The peritoneal cavity contained a considerable amount of intestinal content and the peritoneum had thrown out a plastic exudate. Twelve inches of the jejunum was resected, side to side anastomosis done and the holes in the colon sutured. The patient did well until the third day when there was a profuse discharge of pus and the abdomen was so extremely distended that the pit of the stomach rose domelike from the chest. A diagnosis of functional obstruction was made and a duodenal tube put in the stomach and strapped to the patient's chin with connecting tube which hung into a pail partly filled with water and placed beside the bed. The tube was left twenty-four hours and the patient slept while his stomach was washed at intervals. He was furnished with plenty of fluids subcutaneously and enormous quantities of black material drained into the pail. After this he had a smooth convalescence.

The great danger to our patients is that the surgeon often fails to make a diagnosis of mechanical obstruction because he must recognize this functional cause, or he lacks the moral courage to submit his patient to the ordeal of a second operation soon enough.

The mechanical causes of bowel obstruction during the period of convalescence are very numerous. One patient from whom a chronic appendix had been removed, when we first saw her had fecal vomiting. The abdomen was promptly opened and the coils of the intestine were found glued to the field of operation in such a way that a kink was formed and obstructed the lumen. As the loops were freed peristalsis was rapidly established even before the abdomen was closed. This patient promptly recovered.

A young girl who had an acute, gangrenous appendix removed developed obstruction within a week following appendectomy. Upon reopening the abdomen it was found filled with a thick jellylike material which had caused a gluing together of the coils. The patient was reopened four times for obstruction following the initial operation and the cause was no doubt the rapidity with which the peritoneum threw out the fibrinous exudate. She recovered and for a number of years has had good health.

Another patient upon whom gastroenterostomy and appendectomy were performed for stomach ulcer, developed a pelvic peritonitis and partial obstruction which cleared up to be followed in the course of a week by complete obstruction. Upon

* Read before the Fifty-first Annual Meeting of the Medical Society of the State of California, Yosemite Valley, May, 1922.

reopening the abdomen the pelvis was found matted with coils of small intestine around a rather large abscess. The abscess was drained with large tubes. The futility of any effort to unwind the obstruction in the bowel was evident, and a catheter was placed in a distended loop of the upper jejunum which drained freely for three or four days. The patient made an uneventful recovery. He had stools in four days and the opening in the small bowel closed very soon. We have been unable to account for the pelvic abscess.

Another patient from whom a gangrenous appendix had been removed made an uninterrupted recovery and was about to leave the hospital on the fourteenth day when he suddenly, as is usual in the mechanical obstruction, complained of violent pains in his abdomen. Reopening of the abdomen revealed a volvulous of the small bowel enormously distended, impacted in the pelvis. The site of the twist was near the former site of the appendix and adhesions had probably helped to cause the obstruction. There was no peritonitis. This patient promptly developed paralytic ileus which caused his death.

A nurse who was about ready to resume her duties following the removal of an acute, unperforated appendix, developed a bowel obstruction. Immediate reoperation revealed a volvulous near the site of the former operation which was easily freed and the patient recovered.

A patient upon whom a gastroenterostomy was performed a month before gave a history of very frequent vomiting following the operation. It was found at the secondary operation that the stomach had dragged the jejunum through the opening in the mesocolon which had caused almost complete obstruction of the bowel above and below the new opening. The mesocolon was freed about the gastroenterostomy opening, which was ample in size, and the stomach pulled through for three-fourths of an inch and the mesocolon stitched at this site. This patient recovered.

This is a sufficient number of examples of bowel obstruction during the convalescing period following laporotomies to cover the field. Others have reported obstruction following the Gilliam operation through a loop of small bowel caught about the round ligament in its new position, which has led most surgeons who use this operation to close the opening. Others have reported post-operative obstruction due to thrombosis of the mesentery veins, and ligation of the blood supply of the transverse colon in doing resection of the stomach has been reported. A loop of gut may be caught in the abdominal incision by a separation of the deep layers of the wound and for this reason the incision should be examined in every convalescing patient registering symptoms of intestinal obstruction. A loop of gut also may be caught in the loop of bowel following a posterior gastroenterostomy.

The differentiation between functional and mechanical obstruction is often difficult to make. A correct history and close observation is called for in each case. Early differentiation is imperative because the treatment of the types is radically different.

Functional paralysis usually comes on shortly after operation or after the development of peritonitis or toxemia. The patient does not have the grinding-like pains through the abdomen and is usually apathetic. The abdomen is tremendously distended and symmetrical; vomiting occurs, if at all, several hours after the onset of the distension and it is apt to be of the spitting-up type; gas enemas and irrigations fail to relieve the distension, but with persistence enough gas can be removed to furnish some relief and valuable information. If not relieved these patients develop rapid respiration and rapid heart action and die from toxemia, hypostatic pneumonia and failing blood pressure.

Mechanical obstruction rarely occurs before the third or fourth day and usually not until several days after operation. The patient may or may not have peritonitis. The first symptom to appear is grinding-like pains in the abdomen occurring at intervals, which is followed by vomiting usually violent and often projectile, and the patient shows decided anxiety. The distension of the abdomen and the time of the onset of vomiting depends much upon whether the obstruction is high or low in the bowel. The character of the pain is the pathognomonic symptom and is always present if an accurate history is obtained. Enemas and irrigations fail to produce results except at first the return may contain some particles of fecal matter, but there is no gas, except that which may be injected from the enema tube. Leucocytosis, probably due to dehydration, is present. Running pulse followed rapidly by shock, and death soon follows unless relief is furnished.

In the prevention of intestinal obstruction gentle handling of the tissues during operation is the most important prophylactic measure, and for this reason we advocate wide abdominal incisions.

The treatment of functional ileus is repeated gastric lavage; or better, a duodenal tube with connecting tube which hangs over the side of the bed in a pail partly filled with water; repeated enemas and high irrigations with lubricating liquids. Stimulation of the bowel with Pituritin or Eserin in sufficient doses, each time following immediately with irrigations of the bowel which should be continued from forty to sixty minutes.

The treatment of mechanical obstruction is by operation immediately after the earliest possible diagnosis. In these operations speed is to be desired. If the obstruction is difficult to relieve it is better to put a catheter in the upper small bowel and close the abdomen. Irrigations through this catheter will drain off the toxin and the patient should be treated for shock. There will be time enough to do further operative work if necessary when the patient's condition is less critical.

In both types of obstruction there is secreted into the lumen of the intestine large quantities of water and toxins so it is evident that these patients must have a sufficient quantity of fluids. We give routinely normal salt solution subcutaneously and glucose solutions intravenously as often as required, which furnish the patient with nourishment as well as with fluids.

ABSENCE OF THE PROSTATE ASSOCIATED WITH ENDOCRINE DISEASE *

By H. LISSER, M. D., San Francisco

Whether the prostate deserves to be classified among the incretory glands is as yet extremely problematical. However, certain investigations concerning its possible harmonic activity have been undertaken. For example, DuBois and Boulet in 1919 demonstrated that intravenous injections of extracts of normal prostate cause a contraction of the bladder, whereas, hypertrophied human prostate had no such effect. These findings led the authors to conclude that there is an internal secretion of the prostate which acts as an excitant of the vesicle muscles.

Bogoslovsky and Korentchevsky made observations on the metabolism of two normal and six castrated dogs which were given intravenous injections of emulsion of prostate or of testicle or both. They conclude that the prostate constitutes a powerful stimulant to the internal secretion of the testicle, and the internal secretion of the testicle exercises a stimulating influence on exchange of protein substances especially.

Macht and Matsumoto in 1920 performed experiments to determine whether prostatic extracts in vitro had any specific action on isolated genitourinary organs. They concluded that no specific action existed. Macht recorded further endocrinological studies of the prostate in 1921 and reported that the feeding of prostate hastens metamorphosis of the frog and salamander larvae, but that unlike thyroid it causes no shrinkage of the animals.

Castration was one of the earliest of surgical procedures and in 1775 John Hunter called attention to the fact that castration carried out in *youth* or infancy causes *hypoplasia* or want of development of the prostate. About a century later Griffiths, White and Guyon added the interesting fact that castration in *adult* life causes *atrophy* of the prostate.

In 1893 Griffiths enlarged our knowledge in respect to gonad insufficiency, at the same time introducing the term "eunuchoid" to describe a type of individual who was *lacking* in testicular secretion but had not been castrated. He reported two cases of men aged 30 and 21, respectively, who were of peculiar form, narrow shoulders, broad pelvis, round and plump neck, beardless faces, high-pitched voices, large breasts, and whose genitalia were infantile. In one patient practically no prostate was palpable per rectum; that is to say, a thickening was felt, but no definite gland. The other was examined post mortem and the prostate was hardly more than one-third of its natural size. Microscopic glandular tubules could be detected in the prostate, but they were comparatively few.

Clinical hyperpituitarism produces gigantism before adolescence and acromegaly after puberty. In earlier stages of acromegaly we are acquainted with examples of excessive sexual libido, and in gigantism with instances of premature acquisition of sex power and secondary sex characters. Most of these patients, however, come to the physician in the late stages of the disease when pituitary *inactivity* has supervened, and then we find, in the female, characteristic obesity and amenorrhoea and sterility and in the male diminished libido and potentia, and in both a high degree of atrophy of the sex glands. *This well recognized relationship between the pituitary and the sex apparatus is exemplified even more emphatically in primary hypopituitarism.* The Froelich syndrome discovered in 1901 consists of skeletal undergrowth, obesity, and sex infantilism; the Lorain type likewise demonstrates skeletal undergrowth and sexual aplasia, but *without* adiposity; the Neurath-Cushing variety of dyspituitarism consists of skeletal *overgrowth* with adiposity and sexual infantilism; *the common demoninator in these clinical disturbances is sexual infantilism.* Whether these syndromes are actually due to pituitary insufficiency is at present disputed. Bailey and Bremer and others have reproduced diabetes insipidus, and even obesity with sexual infantilism, in dogs by puncturing the hypothalamus, using the lateral approach of Paulesco and Cushing, giving perfect exposure of the pituitary gland. They have accomplished these results with startling uniformity and careful serial sections of the pituitary gland have shown it to be absolutely free from injury. However, until further investigations settle this important question it will be best to continue to refer to the syndromes of Froelich and Lorain as examples of clinical hypopituitarism.

Attempts have been made to produce hyperpituitarism experimentally. Those that chose transplantation of pituitary substance as a method of producing hyperpituitarism failed in their efforts. Goetsch fed anterior lobe pituitary, posterior lobe pituitary and whole gland pituitary to young rats and obtained very positive results which, however, have not been confirmed. The feeding of pituitary anterior lobe extract caused more vigorous body growth than in the control animals and stimulated earlier and more active genital development. In his report he specifically mentions the *effect of anterior lobe feeding on the prostate gland which showed, like the sex glands, an earlier development and activity.*

Many investigators (notably Crowe, Cushing and Homans, Blair-Bell, and Aschner) proved by producing hypopituitarism experimentally that the genital apparatus is markedly retarded in its development and that this hypoplasia included the prostate as well as the testes, penis and vas deferens. Whether their results were really due to pituitary insufficiency or resulted from accidental injury of the neighboring brain tissue remains to be settled.

In view of the striking genital abnormalities repeatedly emphasized in clinical hypopituitarism, and in view of the specific mention of undeveloped prostates in experimental hypopituitarism, it seemed rather surprising that no reference to the prostate had been made in the innumerable case reports of Froelich, Lorain and Neurath-Cushing hypopituitarism. Accordingly, in 1920, I placed on

* Read before the section on Pediatrics at the fifty-first annual meeting of the Medical Society of the State of California, Yosemite, 1922.

record (The New York Medical Journal, March 2, 1920) five cases of pre-adolescent hypopituitarism, in three of whom no prostate could be felt by rectal examination, and in two of whom only a very tiny diminutive organ could be recognized.

Since that publication several more cases have been discovered so that to date there may be reported *fifteen cases of hypopituitarism* (eight of the Lorain type, five of the Froelich syndrome and two of the Neurath-Cushing type) *and three cases of primary gonad deficiency*. Of the eighteen cases *no prostate could be felt in thirteen cases and only a tiny diminutive organ in the remaining five.*

The prostate is large enough normally in childhood to be easily felt and pediatricians especially are urged to make rectal examination in boys who show other stigmata of infantilism.

Not much is to be gained at this time by elaborating theories concerning absent or diminutive prostate in hypopituitarism. It is established that atrophy occurs after castration; we also know that testicular aplasia occurs in hypopituitarism. *Whether the prostatic aplasia or atrophy in hypopituitarism is due directly to the lack of pituitary secretion or whether it follows upon testicular insufficiency is difficult to decide. As it happens, all the cases that show absent or diminutive prostates likewise show tiny and insufficient testes.*

The above data summarizes briefly a paper to be published shortly which will discuss the question more fully and which will include detailed histories of the eighteen cases together with their photographs.

"The Great Question"—We hospital administrators live in the midst of a mass of questions. They rise and confront us on every hand. They grow up like thistles in the field—questions social, economic, financial, nursing, medical, industrial and international. We walk in a forest of them, some tall as trees and seemingly as big in girth, while others form a jungle of little irritating problems that catch at us and tear us as we try to make our way. Everybody seems so busy asking questions that nobody seems to have time to answer them. One favorite way of trying to answer them is to send out a questionnaire; as if we had moved forward toward the answer to one question by raising forty more. Never mind whether anyone answers or not; send out the question, then feel that we have done something. The sign of the times seems to be a huge question mark.—From the Presidential Address of George D. O'Hanlon, read before the Twenty-fourth Annual Convention of the American Hospital Association, published in The Modern Hospital.

Drifting or Rowing—You are either drifting downstream with the tide and the dead ones, or you are pulling for all you are worth against the current of events. You cannot anchor, for life is one continuous voyage. You are either reading, studying, working, or you are fooling away your most valuable asset—time. If you are trying to improve yourself you are going ahead. If your brain is full of nonsense, you can bet your boots you are drifting down the stream.—The Silent Partner.

SOME OUTSTANDING FEATURES OF RECENT PROGRESS IN SURGERY*

By GEORGE THOMASON, M. D., F. A. C. S.,
Los Angeles

It is, of course, quite impossible within the limits of our allotted time to even touch upon all the phases of recent advances in surgical practice. We must content ourselves with briefly citing the outstanding features of our subject.

Biliary Surgery—One of the most important advances in biliary surgery has been in connection with the pre-operative and post-operative care of jaundiced patients. As it is well known one of the chief risks of operating in the presence of jaundice is the post-operative bleeding, not by reason of the slipping of a ligature from a vessel, but from the multiple points on abraded surfaces, due to diminished coagulability of the blood. Most of the fatalities due to intro-abdominal hemorrhage in jaundiced patients are in cases where the coagulating time of the blood is nine minutes or more. It has been found that calcium chloride in 10 per cent solution, 5 cc., injected intravenously during a three or four-day period will greatly reduce the coagulating time of the blood.

In addition these jaundiced patients should be fed large quantities of carbo-hydrates and given 15 per cent glucose in tap water by proctoclysis and 3000 or 4000 cc. of water by mouth every twenty-four hours, to hydrate the patient and to promote elimination of the toxic bile pigments.

Opie, as the result of his experimental work, believes that carbo-hydrates prevent disintegration of body proteins when the individual is in a state of toxemia. It is believed that the calcium is beneficial, not only in lowering the coagulating time of the blood, but in decreasing toxemia by uniting with the circulating bile pigment. In addition to this Crile recommends an extremely light form of nitrous oxide anesthesia, the avoidance of any narcotic, especially morphin. Hot packs to the liver continued intermittently after the operation until convalescence is established, one or more transfusions of blood during the first week, and in gravest cases, if possible, dividing the operation into two stages, are further protective features for the jaundiced patient. Recently a personal case, a man extremely ill and heavily jaundiced, was treated by the calcium method and the blood coagulating time was reduced from more than nine minutes to seven minutes within two or three days, and largely under local anesthesia a cholecystgastrostomy was successfully performed.

In the development of biliary surgery there is an outstanding feature now quite generally accepted by common consent, namely, that it is extremely unwise and injudicious to perform in one stage an operation involving interference with the pelvic organs and the gall-bladder. Experience has been a very effective teacher in this respect. It is not a question of speed or dexterity on the part of the surgeon, for the fatalities occur in this class of cases, for instance, hysterectomy and cholecystectomy combined, where

* Read before the General Session of the Medical Society of California at Yosemite National Park, May 17, 1922.

the lapse of time has been remarkably short. Practically all surgeons of any considerable experience now do a two-stage operation where gall-bladder involvement is determined in connection with pelvic pathology. The striking statement of the late John B. Murphy, although referring to a different surgical procedure, is most applicable to the man who persists in going the limit in a one-stage operation: "It is complimentary to his daring, but derogatory of his judgment and hazardous to his patient in the extreme."

Interesting and helpful features are developing as to the possible and probable causes of gall-stones. Rosenow's studies have persuaded him that gall-stones result from cholecystitis, being caused by bacterial invasion of the gall-bladder wall. Henes thinks hypercholesterenemia the primary and fundamental etiological factor in the production of gall-stones. Certain it is that many gall-bladders with cholesterin stones give no evidence of infection. Aoyama, producing gall-stones by subcutaneous and oral feeding of cholesterin, has given support to Henes' contention. Rothschild and Felsen noted very high cholesterenemia in obstructive jaundice *due to stone*, while in jaundice due to hepatic lesion the cholesterin content was normal or subnormal. Certainly these observations strongly suggest that the routine examination of the percentage of cholesterin in the blood might be a valuable diagnostic feature in biliary conditions. Next to the appendix, the gall-bladder furnishes the most frequent intra-abdominal lesion requiring surgical interference, consequently progress in the direction of earlier and more accurate recognition of gall-bladder involvement has been most marked. During all the developmental period of biliary surgery there has been considerable swinging of the pendulum of opinion as between cholecystostomy and cholecystectomy; also as to whether the dissection should begin at the fundus or at the ducts; again as to whether or not the duct and artery should be ligated separately, and as to whether or not drainage should be routinely used following cholecystectomy.

There is great diversity of opinion as to the function of the gall-bladder, but probably it is principally a concentrator of the bile. Thus far the removal of the gall-bladder has apparently not been followed by any particularly demonstrable deleterious effect upon the body beyond a dilatation of the extra-hepatic ducts. Sufficient time has now elapsed to permit of the conclusion that the end results of cholecystectomy are sufficiently better than cholecystostomy to justify the more radical operation except in special cases where distinctly contra-indicated.

The opinion seems to be gaining ground that more frequently than formerly supposed there is variation in the relation and termination of the hepatic and cystic ducts and that isolation of the ducts and more accurate determination of their relationship may be obtained in dissecting the gall-bladder from the fundus toward the ducts. Isolation of the cystic duct and its separate ligation is a factor of safety against injury of either the hepatic or the common duct. But aside from this there seems to be no particular advantage in the separate ligation of the duct and artery. Judd expressed to me his personal opinion that it did not make the slightest difference.

Undoubtedly the tendency is strongly toward closing without drainage following cholecystectomy; but this practice involves the necessity for very thorough hemostasis, careful peritonization to prevent leakage of bile from the abraded liver surface, and thorough securing of the stump of the cystic duct by the ligature to prevent its re-opening. There are still many good men, however, who are earnestly pleading that drainage be provided for a few days following cholecystectomy.

There has been great advance in the matter of plastic and repairative work on the bile ducts in the use of pedicled flaps of bowel or stomach or, better still, by the reimplantation of the duct either into the stomach or duodenum.

Gastric Surgery—Since 1881, when Billroth did the first successful pylorectomy and Wolfler the first gastro-enterostomy, gastric surgery has passed through the era of almost utter abandonment, due to disappointing results and excessive mortality, to that of perfected mechanical facilities, highly developed technique and diagnostic acumen, bringing gastric surgery to the point of brilliant achievements equal to that of any phase of surgical endeavor. The period of disappointing results from ill-advised gastro-enterostomies led to a more careful differentiation of cases and to more specific classification of indications for this procedure until it now rests upon a much less questionable basis than in the days of its much more frequent abuse. Moynihan believes that 90 per cent of the unfavorable results of gastro-enterostomies can be accounted for on the basis of the operation being done without organic lesion, that is, for functional disorders or for chronic diseases elsewhere than in the stomach.

Most of the discussion in gastric surgery now chiefly involves the question of the proper surgical treatment of gastric and duodenal ulcer, whether ordinary gastro-enterostomy is sufficient for single pyloric and duodenal ulcers or whether circular excision of the ulcer with gastro-enterostomy should be adopted. Deaver believes if the ulcer is allowed to remain it may or may not heal, and his experience has led him to resect the ulcer in addition to doing a gastro-enterostomy, thus reducing the chance of carcinoma and of subsequent hemorrhage or perforation. In Bull's clinic in Christiania, simple gastro-enterostomy has seemed to give as good results as resection in ulcers *near* the pylorus and in the duodenum, but far less satisfactory results are obtained from gastro-enterostomy when the ulcers are at a distance from the pylorus. Judd believes that for ulcer in the cardiac end of the stomach it is better to do a gastro-enterostomy in addition to excision because at least one-third of these patients have recurrence of symptoms where mere excision without gastro-enterostomy is done. He believes the rhythm is broken when certain portions of muscle are removed, causing two waves to come together so that the stomach does not properly empty. When gastro-enterostomy is done and the ulcer not excised, 65 per cent recover and in 35 per cent symptoms will recur. Judd believes

gastro-enterostomy without excision is the procedure of choice for duodenal ulcer. Curt Methling of Leipsic observes that for ulcer of the stomach or duodenum near the pylorus simple gastro-enterostomy gives a very satisfactory immediate result, but that after a few months there is a sense of pressure, more or less hypo-chlorhydria, anacidity and chronic gastritis, just as unpleasant in its phenomena as the original ulcer. The bile flowing through the anastomotic opening, combining with the acid, controls the hyper-chlorhydria for the time, but later the effect of the bile in the stomach is to injure the secretory activity of the gastric glands and to eventually produce a chronic anacidity with gastritis.

It seems probable that an entero anastomosis, short circuiting the proximal and distal jejunum three to four inches from the gastro-enterostomy will overcome this interference of the admixture of bile with the stomach contents. This entero anastomosis can be very quickly and easily done with a small Murphy button, the two halves of the button being dropped into the proximal and distal jejunum when the bowel is opened for the gastro-enterostomy.

With the relative frequency of carcinoma being superficial upon an old ulcer one can not escape the conviction that wherever possible all gastric ulcers should be excised. It is equally true regarding the danger of subsequent perforation. Nathan Winslow recently reported twenty-nine cases of perforated gastric and duodenal ulcer which were operated. Fourteen recovered and fifteen died. Twenty-three of the twenty-nine cases gave histories of gastric disturbance typical of ulcer, for which had proper treatment been instituted the emergency operation with high mortality might have been avoided. Progress in the surgical treatment of gastric carcinoma has been very gratifying. Results showing at least 25 to 30 per cent of three to five-year cures. It is now believed that in fifty per cent of gastric carcinomas there is no metastasis, consequently a much larger percentage of these cases lend themselves to favorable surgical interference than was formerly supposed.

Experience has seemed to demonstrate that the Billroth II and the Mayo modification of the anterior and posterior Polya operations give the best results in partial resections of the stomach. With the regular posterior Polya I believe there is much greater danger of back pressure causing a reopening of the blind duodenal stump, possibly through too complete incorporation of the jejunum with the heavier gastric walls, producing more or less obstruction. I have twice had the experience of duodenal leakage after performing the posterior Polya. Where sufficient stomach is left so that it can be brought through the opening in the transverse meso-colon it seems the modified Polya is the best type of gastric resection; but where it is necessary to remove more than one-third or one-half of the stomach the modified anterior Polya is decidedly the best. The emptying of the stomach along the lesser curvature into the distal jejunum, through a small opening, the overlapping of the sutured stomach by the jejunal walls and the saving of time made possible by this technique makes of this operation an exceedingly gratifying gastric operative procedure.

Babcock joins the duodenum to the lesser curvature of the resected stomach and overlaps the sutured portion of the stomach with the duodenal walls and thus avoids the "Fatal Angle" and re-establishes a normal relationship between the stomach and duodenum.

Thoracic Surgery—From among the remarkable developments in thoracic surgery during recent years we can only mention one or two.

Empyema—The great epidemics of 1917 and 1918 afforded unparalleled opportunity for observation and study of the empyema problem. At first early operation was resorted to, that is, while the pneumonia was active, and the mortality was frightful, running as high as 60 per cent. With the change in this feature and by adopting the policy of operating early so far as the empyema was concerned, but late so far as the pneumonia was concerned the mortality was reduced to about 5 or 7 per cent.

Only one other recent advance in chest surgery will be mentioned, and that is Jacobaeus thoracoscopic examination of the chest through a pneumothorax and direct cauterization of the old adhesions, thus permitting of collapse of the lung in tubercular and empyemic conditions. At the recent meeting of the American College of Surgeons, Jacobaeus reported seventy-eight cases of intrathoracic adhesions treated by his method, in fifty-five of which the adhesions were successfully removed and in which 63 per cent of the cases showed pus and sputum rapidly disappearing and the patient becoming symptom free. He further reports several cases of intra-thoracic tumor having been diagnosed by the thoracoscope and afterwards successfully removed by surgical interference.

The Thyroid—Perhaps no other field of surgical endeavor has been more fruitful in recent years than that of surgery of the thyroid. It is now possible to hold out to this class of patients most brilliant prospects of complete recovery, no matter from what type of pathologic thyroid they may be suffering. Radium emanations, protecting the heart with digitalis and hydrotherapy, blood transfusions, open wound for the first twenty-four hours for rapid drainage and metabolic studies, have developed additional factors of safety in thyroid surgery.

Acidosis—The development of the theory of acidosis and its importance in estimated degree of surgical risk is now regarded as of immense value as an adjunct in surgical practice. The incident of acute acidosis during operation is 14 per cent and is more frequent in women than in men. Glucose and soda bicarbonate, administered intravenously during operation, both intravenously and by bowel following operation, together with carbohydrate feeding before and after operation, will entirely prevent or lessen the incident of acidosis. Time forbids any attempt to discuss many other splendid illustrations of wonderful surgical advancement in recent years. Blood transfusion has proven of such inestimable value and its field of usefulness is rapidly broadening. Crile gives transfusions in infections of all kinds. One patient reported was

given 2600 cc. of blood in six hours. In streptococcus hemolyticus in his clinic, recoveries have increased 50 per cent by transfusion. Good results have been obtained in lateral sinus thrombosis and in severe types of exophthalmic goitre.

In conclusion, we remark that undoubtedly the most gratifying feature in these evidences of progress in surgical practice is the contemplation that every advance step means the mitigation of human suffering, the prolongation of life in greater comfort, and the contributing to the sum total of human joy, which after all represent the best rewards and the greatest stimulus to the surgeon for the attainment of the highest possible efficiency in the practice of his chosen profession.

(317-320 Hollingsworth Bldg.).

Hospital Standardization and the Closed Hospital—Since every physician is in favor of anything that will contribute to the better care and treatment of the sick, no argument is necessary to convince the medical profession of the desirability of improving the efficiency of hospital service. The term (standardization of hospitals) is an unfortunate one, since it does not convey in any sense the ends to be accomplished, namely, better care and treatment of the sick. The best criterion of hospital efficiency is the amount of human suffering relieved by the work done in that institution. . . .

Most hospitals are controlled and managed by a board of trustees, and this body is responsible for the policies of the institution. Hospitals are the workshop of physicians; the material worked on is the sick; the output is health. . . . When medical men dominate the policies of the boards of trustees of hospitals, we shall see fewer humiliating instances of medical men selling their soul and body and independence to an institution for the privilege of having their names appear as a member of the staff of the institution.

The closed hospital has come to the front as a result of the propaganda of so-called standardization of hospitals. This sounds much like, and is on a par with, the closed shop of the labor unions. Unless a man is a member of the union, he may not work in a union shop or place.—The American Medical Press.

1922 Death Rate is Higher and Birth Rate Lower—The Department of Commerce announces that provisional mortality figures compiled by the Bureau of the Census for the first quarter of 1922 indicate higher death rates than for the corresponding quarter of 1921. For the States compared the death rate for the first quarter was 13.7 in 1922 against 12.6 for the first quarter of 1921. The highest mortality rate for the quarter is shown for the District of Columbia (17.6) and the lowest for Wyoming (9.6). These early figures forecast for the year 1922 a higher rate for the death registration area than the record low rate (11.7) for the year 1921.

Provisional birth figures compiled by the Bureau of the Census for the first quarter of 1922 indicate lower birth rates than for the corresponding quarter of 1921. For the States compared the total birth rate for the first quarter was 23.3 in 1922 against 25.3 in 1921. The highest birth rate for the quarter (29.2) is shown for North Carolina and the lowest (16.5) for the State of Washington. Higher rates will be necessary for the remaining months of the year if the 1922 rate is to equal the 1921 rate for the birth registration area—24.3.—The Modern Hospital, October, 1922.

THE HEMORRHOID PROBLEM*

A REVIEW

By SOL. HYMAN, M. D., San Francisco

Twenty-five hundred years ago Hippocrates treated piles by cauterization with the hot iron and by ligature, and no advance was made until the introduction of general anesthesia. The ancient methods were then improved, and later Whitehead devised his operation for complete excision of the pile-bearing area, so that today we have the three principal methods of handling piles: ligature, clamp and cautery, and the radical Whitehead procedure.

During the past twenty-five years the fashion with regard to the choice of procedure has changed, but nothing new has been added. At the beginning of this period the German school was dominant, and the clamp and cautery held the field. Then, for a brief period, trained surgeons, seeing the possibilities for a real cure in the excision of the hemorrhoidal plexus, adopted Whitehead's radical operation. But this never could become a general procedure, requiring greater surgical ability than that possessed by the host of practitioners upon whom responsibility for the treatment of piles falls.

Latterly there have come into being specialists for diseases of the rectum and anus, many of whom lack the surgical training necessary for the performance of this often major operation; and practically all of them advocate ligature, either in mass or with dissection of the individual piles, this view being shared by most American surgeons, some reserving the Whitehead operation for the extreme cases with a complete rosette.

Of the three operations at our disposal, which is the best, judged from the standpoints of simplicity, post-operative comfort, and freedom from complications and recurrences?

1. *Simplicity.* The clamp and cautery operation is the simplest, with the ligature method in all of its modifications following as a close second. There is but little to choose between them. Whitehead's procedure, necessitating an accurate dissection and removal of the lower end of the bowel, cannot be reckoned with these from the viewpoint of simplicity.

2. *Post-operative Comfort.* Arthur Neve, in a series of 855 cases, states that, following the ligature operation, many of the patients suffered great pain; following the clamp and cautery operation, practically none. The catheter was used once, on the night of the operation, in about 10 per cent, and subsequently in but two or three of the 855 cases. Anderson reports 300 operations in 18 months from St. Mark's Hospital in London: 150 by ligature, 100 Whitehead, 50 clamp and cautery. Severe post-operative pain was present in none of those operated upon with the clamp and cautery, in 10 per cent of those in which the ligature was used, and in 16 per cent after the Whitehead operation; moderate pain followed these procedures in 30 per cent, 57 per cent and 56 per cent, respectively; and but little pain in 70 per cent, 33 per cent and 28 per cent. The degree of pain was

* Read before the Surgery Section of the State Medical Society Annual Meeting, Yosemite, May, 1922.

measured by the amount of morphine required, little pain requiring none, moderate, one-quarter grain dose, and severe more. In his series the catheter was required in 10 per cent of the ligature cases, 6 per cent of the Whitehead, and none of those where the clamp and cautery was used. The average stay in the hospital was 10 days following the clamp and cautery, 21 following ligature and 26 in the Whitehead cases. Stone, reporting a series of 470 cases operated upon by the method of Whitehead, found that 36 of 146 cases required the catheter, and that the average stay in the hospital has been cut to 10 days.

3. *Post-operative Complications.* Hemorrhage of a noteworthy degree was present in one of Anderson's clamp and cautery, four ligature and two Whitehead cases. In spite of these figures we know that severe post-operative hemorrhage has followed the clamp and cautery operation in many an unpublished case, due to the gaping of the seared edges. Post-operative tags occurred in 6 per cent of the clamp and cautery, 5 per cent of the Whitehead, while 15 per cent of the ligature cases were followed by this annoying sequel. These tags usually require secondary removal to prevent soiling of the underwear, pruritis and burning. They are shrunken external hemorrhoids and are usually produced by the surgeon during dilatation of the sphincter, injection of the local anesthetic or in the course of the operation, and we know no method of preventing their occurrence. One sees them with or without dilatation of the sphincter. That most of them are due to the trauma of the operation itself is undoubted, our experience agreeing fully with that of Anderson. Painful thrombotic external piles, frequently requiring the evacuation of a thrombus to relieve the severe pain, are not uncommon following the ligature operation, and but rare following the clamp and cautery, as is the painful, tender, swollen rosette so often seen about the rectum after the use of the ligature.

Anderson found no abscesses or fistulae to follow the clamp and cautery, and but very few following other methods. Stone gives a list of 10 such cases in his series of Whitehead operations. Sphincter control (Anderson) returned:

Following clamp and cautery on the sixth day.

Following ligature on the tenth day.

Following Whitehead operation on the twelfth day.

Stricture followed in none of the clamp and cautery cases and in 45 of his 150 ligature cases, 5 per cent of them requiring instrumental dilatation up to six weeks following operation. All were cured. Stone reports five strictures in 185 of his Whitehead patients whom he was able to trace. The mortality is negligible, Neve having the only death in 2125 cases reported by four writers.

4. *Recurrences.* Neve notes five known recurrences in 885 cases. Anderson had none by any method, but did not follow his cases over six weeks from the time of operation. During six months, however, he met with but one recurrence after 18 years, in the hundreds of cases presenting themselves at the outpatient department of St. Mark's Hospital. Harvey Stone notes five more or less extensive recurrences in 185 cases followed, many more than one would expect after the radical excision of the hemorrhoidal area. There is no large series of cases reported giving us a basis for judgment concerning the ligature operation.

From the available literature it would seem that the clamp and cautery operation is the operation of choice from the standpoint of simplicity; that it is far and away the best operation in respect to post-operative comfort and freedom from complications, and as good as any judged by the number of recurrences.

In this connection it must be stated that O'Connor reports 500 cases operated upon by the Whitehead method without dilatation of the sphincter, with not one even partial relapse, and with a very comfortable convalescence.

A word should be said concerning the anesthetic. Some of the rectal specialists condemn the clamp and cautery operation as not feasible under local analgesia. I have performed dozens of operations in this manner, and assistants in the hospital have had no difficulty in doing so. In the light of the above figures their statement that the clamp and cautery procedure need only be mentioned to be condemned must be taken with a grain of salt.

In order to circumvent the danger from hemorrhage, really the only weak point, in the clamp and cautery operation, I perform the operation as follows: The individual piles are brought down, following dilatation of the sphincter (general or local anesthesia), and grasped at the base with a heavy, ivory-backed pile clamp, cut and thoroughly seared. Before removing the clamp the mucosa is caught above and close to the clamp with a hemostat. The clamp is now very slowly removed and a suture of fine catgut passed distal to the hemostat and tied above it so as to include the artery of the hemorrhoid which enters the upper third of the nodule. This suture, on a fine needle, is now whipped over the seared edge. This gives as comfortable a convalescence as does the simple clamp and cautery operation and completely relieves the worry concerning hemorrhage. For simple pedunculated piles the ligature is used, and the Whitehead operation is reserved for the extensive rosettes.

Now It Is the Super-Woman Nurse Who Is to Supersede the Doctor—The recommendations of the Rockefeller nursing committee, which organization is trying to gain a foothold in Michigan, and in our estimation ultimately to submerge the medical profession and completely supplant the garden-variety physician by the "super-woman nurse" who is to tell the people when they need medical aid and then call on the doctor for it. Our old German friend, Nietzsche, had nothing on the secretary of the Rockefeller nursing committee for ego.

We note with chagrin that the chairman of the Rockefeller nursing committee, the secretary of same and another member of the committee appear on the letter-head of the American Association for Labor Legislation (the old Health Insurance organization) as members of the administrative council. C. A. E. Winslow is chairman, Josephine Goldmark is secretary, and Miss Mary Beard is a member of the committee. Does it show that our old enemies, the advocates of Compulsory Health Insurance, are playing possum?—Editorial, Illinois Medical Journal, October, 1922.

THE NECESSITY FOR AN IMMEDIATE AND THOROUGH ROENTGENOLOGICAL STUDY OF ALL INJURIES TO THE SPINE*

By HALBERT W. CHAPPEL, A. M., M. D., Los Angeles

Damage to the spine may be by acute injury, chronic strain or by disease, by any two of these, and not infrequently by all three. Quite severe and often completely disabling symptoms sometimes follow very slight trauma. Such cases are really arthritic but with very slight manifestations; or there are congenital variations in the shape of the bones, causing lessened stability which is always a possible source of weakness. On the other hand, this very slight trauma may be sufficient to fracture a transverse process of a vertebra.

As in other parts of the body, the muscles of the back may suffer from simple strain due to hard labor or heavy lifting. The history will often reveal a few weeks at manual labor by a person who had always lived a sedentary life, the chief symptoms being soreness and stiffness of the lower lumbar region, giving only partial disability, and should gradually pass away without any treatment. Sometimes, however, these symptoms persist and the X-ray study shows a congenitally weak back, or arthritic changes.

There is a great difference of opinion as to what really takes place in the sacro-iliac synchondrosis during trauma. As the X-ray does not reveal any definite variation from the normal in the joint itself, the cause must be carefully sought from a study of the neighboring structures, and from a history of repeated traumatism of the lower back. Heavy lifting, frequently assuming the posture of forward body bend and remaining for an appreciable time, thus stretching the ligaments of the sacro-iliac joints, or direct trauma from a fall or blow, will make the joint very susceptible to acute strain or sprain. Take a case of a person stooping quickly to pick up some light article. He has a sudden sharp pain in the joint itself, inability to assume the erect posture, a sensation of something snapping and deviation of the trunk towards the affected side, which are characteristic of acute sacro-iliac strain. The diagnosis can be confirmed by eliciting marked tenderness over the joint on deep pressure, often a fullness over the joint due to fluid in the joint, a positive Kernig's sign, marked spasm of the erector spinae muscles, especially on the affected side, and marked limitation of motion during lateral bending away from the affected side, due to pain and muscle spasm because of a direct pull on the structures forming the joint.

In a more severe type there is an actual slipping forward of the sacrum on the ilium, up to one-fourth of an inch, and this usually happens when there is a congenital variation of the first sacral segment, causing an abnormal sacro-iliac joint, or when there is a sacralization of the fifth lumbar vertebra. When there is a dislocation of the sacro-iliac synchondrosis a stereoscopic X-ray is of value in determining the extent and direction of displacement.

In treating acute strain of the sacro-iliac joint, absolute rest of the joint must be insisted upon. Firm adhesive strapping, and recumbent posture on a non-sagging bed with a small pillow supporting the normal lumbar curve, should give prompt relief from the symptoms. After ten days an effort should be made to turn in bed, and if not painful then there should be freedom in bed for a few days before weight-bearing. A support to the lower back with a tight sacro-iliac strap will limit motion in the joint and prevent a recurrence. If these simple measures fail to give relief at once, then a high plaster of Paris spica will be necessary for about three weeks.

A partial dislocation must be reduced by manipulation under a general anaesthetic, the success of which is usually made known by a sharp sound as the joint regains its normal position. Then it should be treated the same as that outlined for acute sacro-iliac strain. These disabilities often become sub-acute or chronic because of the adhesions that have formed around the joint. Stretching is a most efficient form of treatment, and frequently gives instant and permanent relief.

Damage to the lateral lumbo-sacral joints is often overlooked, both clinically and roentgenologically. The causes are the same as in injury to the sacro-iliac joints, with the very important addition of twisting. The subjective symptoms are higher and more deeply seated. Lumbar lordosis is marked, with the trunk flexed toward the affected side, and with marked muscle spasm on both sides of the lumbar spine. As the joint is deep seated, tenderness cannot be relied upon as a symptom. Movements of the thighs, which are painful in injuries to the sacro-iliac joints, are free and painless. A clear X-ray will detect very slight changes in the lumbo-sacral articulation, and frequently reveals a congenital malformation of the articular facets.

It is not uncommon to find in cases of severe and prolonged backache that one of the articular facets of the lumbo-sacral joints has been fractured, and is surrounded by a large amount of dense callous. For strains or sprains there must be complete and prolonged rest. For fracture of an articular facet there should be complete rest in bed for three months, with some form of rigid jacket, followed by three months of gradually increasing activity and support from the jacket during weight-bearing. It is extremely important to limit callous formation so as to prevent pressure on the adjacent nerve roots, which would always cause pain and sometimes paresis.

Rest is absolutely necessary in all acute lesions of the spine. Massage and active and passive exercises are very detrimental during the acute stages, as they increase the formation of bone

* Read before the Fifty-first Annual Meeting of the Medical Society of the State of California, Yosemite Valley, May 18, 1922, accompanied by twenty-four lantern slides.

callous or scar tissue, which results in a chronic inflammation in or around the joint. Baking and hot compresses may relieve pain and should hasten repair in the bone or soft tissues. Great care should be taken in restoring the patient to normal activity, and this can best be accomplished by graduated exercises and active and passive stretching.

Where there has been an error in diagnosis, and therefore unintelligent treatment, the cases become chronic and suffering is intense. The following cases were selected because a thorough roentgenological study immediately following the injury would have been the only means of arriving at a correct diagnosis:

CASE REPORTS

Case 1—L. A., male, age 56. While lifting heavy sacks of sugar caused an acute right sacro-iliac strain. His symptoms improved only slightly under treatment. No X-rays were taken until four weeks after the accident. They showed the fifth lumbar vertebra to be situated unusually low between the crests of the iliac bones, with a possibility that the transverse process of that vertebra may impinge on either ilium and strain the sacro-iliac ligaments. This condition of the lumbo-sacral spine makes that region much more susceptible to injury. There was also evidence of an hypertrophic arthritis of the lumbar spine. The accident was not the real cause of the discomfort of which he complained four weeks later.

Case 2—J. H., male, age 35. An acute strain of the lower lumbar spine when swinging a sledge hammer, while bending forward with rotation. He was unable to do heavy work three months later, when the first X-rays of the injured region were taken. They revealed a malformation of the fifth lumbar vertebra, but no forward or downward displacement of it. An extra sacral vertebra was also revealed, which with the malformation of the fifth lumbar is a weak place during heavy lifting, and added greatly in producing the strain which will be slow to repair.

Case 3—G. T., female, age 32. Has had repeated attacks of sharp pain, coming on gradually, starting in the right sacro-iliac region, and being slowly transmitted to the right hip and down the right lower extremity. After rest in bed for a few days these attacks entirely subsided. There was never anything unusual that seemed to produce an attack. The first X-rays were taken March 30, 1922, and showed a congenital anomaly in the lumbo-sacral region, that is, a sacralized last vertebra. The transverse process on the right side has all the roentgenological ear-marks of being a lumbar vertebra, while on the left it has the characteristics of a sacral vertebra, and this transverse process also articulates with the top of the sacrum. This condition is a constant strain to the right sacro-iliac joint, and easily produced the symptoms of which she complains.

Case 4—H. F., male, age 44. Had always lived a sedentary life until two months before his alleged injury, during which time he was doing heavy labor. One day following extra heavy lifting his lower back was stiff and quite painful, so that he was unable to continue work. These symptoms have cleared up, but he now complains of pain in the right sacro-iliac region, which is transmitted down the right lower extremity. The first X-ray was taken five months after the injury. This showed a congenital malformation of the last lumbar vertebra, and one which is more prone to strain than is the normal back.

Case 5—M. P., male, age 37. Complains of pain and weakness of the lower back during the past few years, and at times quite severe and with no history of injury to the spine. Recently he has taken long automobile rides, some of them over rough roads. The first X-rays of his spine were taken August 1, 1921, and showed only four lumbar vertebrae, the fifth being sacralized and having all the X-ray appearances of a sacral vertebra. Its position is practically that of the first sacral, producing a congenital anomaly of the sacro-iliac region. This type of spine is mechanically incorrect and therefore much more prone to injury than is the normal back.

Case 6—J. McK., male, age 46. Suffered an injury to the lower back and right sacro-iliac regions when a heavy timber which he was holding suddenly slipped. X-rays which were taken soon after the injury showed an overgrowth of bone connecting the bodies of the fourth and fifth lumbar vertebrae and a congenital anomaly in the lumbo-sacral junction, there being a sixth lumbar vertebra which is situated unusually low between the crests of the iliac bones. The symptoms of acute strain were treated, and his condition grew gradually worse. X-rays taken fourteen months later gave the same findings as above, but, if it had not been for those taken immediately after the injury, it would have been impossible to have properly rated the patient.

Case 7—W. L., male, age 32. While lifting bundles of lumber over his head and tossing them into a truck he felt a sharp pain in the left upper lumbar region, and was unable to continue work. For nearly two and a half years his condition grew worse under various kinds of treatment. One and one-half years after the injury the first X-ray was taken and showed no lesion, but, as it was not clear, another one was immediately taken, which showed a fracture of the left transverse process of the first lumbar vertebra, with separation of the fragments. This was removed, adhesions along the entire spine were actively freed, and two months later he returned to full time work.

Case 8—J. G., male, age 19. Was tossed in a blanket at school and fell several feet, striking on his neck. It has been three years since the accident, and certain twisting movements still cause severe pain which lasts several days. No X-ray was taken until recently, which revealed a slight narrowing of the body of the sixth cervical vertebra, probably caused at the time of his accident. It is a very common site for fractures of the body of the cervical vertebrae; but this could only be definitely proven by comparing with plates made immediately after his injury. After freeing adhesions a full and painless range of motion was restored.

Case 9—B. S., male, age 36. Was struck on the forehead while looking up, and his head was violently thrown back. Since the accident, several months ago, he has been treated actively with no support for the head, his condition gradually growing worse. The first X-ray was then taken and showed that a spicule of bone had been pulled from the lower part of the body of the fifth cervical vertebra—a fracture-sprain. I am presenting the anteroposterior view to prove how easily the lesion could have been missed without a clear lateral view which is so often omitted.

Case 10—M. B., male, age 49. Tripped over a bale of hay and fell about twelve feet, the bale of hay landing on his back. This was followed shortly by total motor and sensory paralysis of the lower extremities, which cleared up during the next few weeks. Now there is pain, stiffness, and marked weakness of the lumbo-sacral region, and inability to move the lower spine. X-rays of the lower spine were taken soon after the accident and were reported negative to fracture and dislocation, but gave evidence of hypertrophic spondylitis. X-rays taken nine months later showed an

increase in the density of the left lumbo-sacral articular facets, due to new bone formation. This overgrowth of bone may be the result of a fracture at the time of the accident and the direct cause of his present discomfort. That is a common site of fracture and one which is frequently overlooked.

Case 11—C. C., male, age 40. Fell from a roof, landing on the top of his head. There was severe pain in the mid-dorsal region, and in the front of the chest. No X-rays were taken, and he was treated for simple back strain, but without improvement. The first X-rays were taken eight months later, and showed a compression fracture of the body of the eleventh dorsal vertebra. A complete study of his spine also showed congenital anomalies, such as a sacralized last lumbar vertebra, the transverse processes having all the characteristics of a sacral vertebra, and a slight sacral spina bifida.

Case 12—J. B., male, age 50. Was struck violently on the top of the head by a piece of rapidly moving casing. He had a sharp pain at about the level of the eleventh and twelfth ribs whenever he moved. No X-rays were taken. He returned to work in two weeks, but gradually grew worse and had to stop. The first X-rays were taken six months later, and showed a comminuted fracture of the body of the eleventh dorsal vertebra, which is wedge-shaped, with a fracture line through the anterior part of the body. An anteroposterior view alone would have failed to reveal the extent of the lesion.

Case 13—J. K., female, age 35. Ten years ago fell forty feet, landing on her feet, and then immediately and forcibly taking a sitting position. There was intense pain in the back, the sensation of formication of both legs and the lower part of the body, and complete flaccid paralysis of the left foot. No X-rays of her spine were taken until recently, which showed an old fracture of the first lumbar vertebra, with some new bone and ankylosis of the spines and laminae of the first and second lumbar vertebrae. Her paralysis is probably due to cord injury of the fourth and fifth lumbar segments, which lie about opposite the first lumbar vertebra.

Case 14—G. S., male, age 51. While sitting on a camp stool lacing his shoe, which was on the running board of his machine, fell suddenly to the ground because the stool collapsed. Pain, spasm and limited motion in the lower back grew gradually worse under treatment for back strain. Two months after the accident an X-ray was taken, and reported negative to any injury of the spine. Eight months later there was not only no improvement, but there were beginning motor and sensory disturbances of the right lower extremity. An X-ray at that time revealed a compression fracture of the body of the fifth lumbar vertebra.

Case 15—S. K., male, age 25. A steeple-jack. Fell fifty feet from a flag pole, landing upright on both feet. An anteroposterior but no lateral X-ray of the spine was taken a few days after the accident and there was no treatment for the spine. On the other hand he was allowed to sit up and twist his body in any direction. Two months later both anteroposterior and lateral views were taken, and showed a crushing of the body and pedicles of the third lumbar vertebra, with displacement forward and a large wedge-shaped piece displaced anteriorly. The body of the fifth lumbar was also crushed, but there was no displacement. Although there were no cord symptoms, he was given rigid treatment for the spine and a most excellent result was obtained.

A careful and complete diagnosis of the above lesions will often make intelligent treatment possible, and will prevent much unnecessary disability and suffering.

THE OUTLOOK IN NEURO-PSYCHIATRY *

By WALTER F. SCHALLER, M. D., San Francisco

It seems fitting for me to address you in this retreat of nature, far away from our practical activities of the consultation-room, hospital and laboratory, not on a technical subject of neuro-psychiatry, but on the expectancy of progress and future knowledge in this, our special field. Each one of us, in the light of new individual experience and accurate observation, is contributing more or less toward this progress and knowledge. Scientific medical advance is not made, however, by leaps and bounds, but by the time-consuming and painstaking recording and interpretation of facts and by their practical application to the problems at hand. Even the trained medical man because of such conservative and sound methods, may not be conscious of, or at least may for the time forget, the steady advance of recent years, so I trust it may not be amiss, before indulging in prophecy, to give a brief retrospect of the neuro-psychiatrical progress in the last two decades.

This period has witnessed a considerable addition to our clinical knowledge by technical tests, and by defining disease syndromes, confirmed by histo-pathologic investigations. Noteworthy is the better understanding of motor disorders; the valuable addition of the pathologic pyramidal tract reflexes; the separation from the spastic pyramidal tract disorders of the plastic rigidities, dystonias and involuntary and associated movements of the corpus striatum group, which has developed particularly from the studies of lenticular degenerations, paralysis agitans, and epidemic encephalitis; and the separation of cerebellar ataxia from the peripheral ataxias by the definition and study of muscle asynergias.

Brain localization, especially as regards the localization of speech, has undergone a very healthful revision by more exact anatomical studies. The discovery of the remarkable autonomy of the divided spinal cord in man has thrown great light on the physiology of the cord and especially on its reflex action and tonus mechanism. The sympathetic nervous system has been the subject of much physiological and clinical investigation, and the close relationship between this part of the nervous system and certain of the glands of internal secretion has been definitely established.

Lumbar puncture and cerebrospinal analysis have become routine diagnostic procedures, without which a neurological diagnosis is at times impossible. Studies of the cerebrospinal fluid circulation have explained the mechanism of hydrocephalus, and suggested a means of its correction. The replacement of the cerebrospinal fluid by air has permitted the exact picturing of the subarachnoid space by pneumograms, thus outlining the ventricular and cisterna cavities. By this method encroachment on these spaces as by tumors may be demonstrated, also the existence of a circula-

* Chairman's Address, Section of Neuro-Psychiatry, California State Medical Society Meeting, Yosemite Valley, May 16, 1922.

tory block. Development of Roentgenological technique, particularly that of stereoscopy, has been a great aid in diagnosis of both general and focal brain and spinal lesions.

Perhaps there has been no greater advance in diagnosis and treatment than in syphilis, inclusive of neuro-syphilis. The discovery of the organism of syphilis and of the syphilitic nature of tabes and paresis, a highly characteristic biological test as a means of diagnosis, a dependable and non-toxic arsenic preparation having curative properties and a means of direct attack upon the infected meninges and adjoining parenchyma in neuro-syphilis by intraspinal treatment, fills a chapter which is one of the most brilliant in all the annals of medicine.

The accurate mechanical determination of blood pressure has led to a much better understanding of cerebral vascular accidents, viz., anemia, thrombosis and hemorrhage. The isolation of the organisms of multiple sclerosis, acute poliomyelitis, and epidemic encephalitis, seems most probable.

In mental pathology we discern a tendency toward investigating basic etiological factors rather than classification along lines of pure symptomatology alone. There has been much light shed on the psychopathic constitutional state by personality analysis, hereditary factors, and a sociological investigation of unfavorable environmental conditions and maladaptations. The role of infections, particularly focal infection, has appeared to explain many cases of confusional psychoses and praecox-like states. The thyrogenous psychoses have been recognized as a type of dysendocrinism.

Mental rating tests have been developed to measure intelligence and have developed into useful diagnostic aids, both in amentia and dementia. Criminological surveys have given us valuable and remarkably constant data, which has interested not alone the medical profession but the custodial, legislative and judicial branches of the law. Indeed, among this latter group is a rapidly growing conception that the problem of the habitual criminal is a medico-psychological and social problem rather than a problem to be solved alone by deterrent term punishment. The psycopathic hospital or ward has become as great a necessity as the general medical and surgical hospital or ward. Psychanalysis as a means of investigating functional nervous states (the functional neuroses) has developed a large following and has found a field of usefulness in diagnosis.

Much light has been shed on the nature of post-traumatic neurotic conditions from the experience with industrial accident cases, and from the experience of the Great War in the so-called shell shock cases. Also much valuable experience has been obtained in these cases by the favorable results of occupational therapy, by healthful and favorable suggestion, and the removal of bad environmental conditions.

Looking back on the rich heritage of the comparatively recent past, one must indeed lack optimism who doubts brilliant progress in the future, as each new advance has opened up large vistas of scientific investigation and research. The anatomy and physiology of the nervous system has yet to be completed, and our knowledge of the sympathetic nervous system is elementary. Further knowledge as regards cellular histology only awaits newer methods. Who can doubt the complexity of the male and female germinal cells, for instance, which from the time of their union have contained all of those elements which go to form ultimately the developed human body, possibly with many characteristics of one or both parents. The protoplasm of such cells must be a very complex and differentiated structure. Scientific research of form and function is as important today as in the past and has equal importance with biochemical research. Pure biology will always be an important aid to medicine along the lines of comparative anatomy, embryology, parasitology, bacteriology and immunology. Animal experiment is absolutely necessary for scientific medical progress. The greatest blow to scientific medicine would be the enactment of anti-vivisection laws.

The problem of the mentally deficient and the psychopathic child or adult is essentially a medical one in its broadest sense. But neither the mental rating tests nor the psychopathic hospital in themselves have solved the problem of these types. The mental rating test is a measure of native intelligence and educational training, but can not measure morality, or general aptitude such as is expressed by personality, responsibility, courage, ambition, persistency and initiative. The psychopathic hospital is a clearing house for the ultimate disposition of its inmates. The disposition of the habitual criminal awaits a practical solution, because his reformation has been given adequate trial and has failed in a formidable percentage. There is a growing sentiment that he should be permanently removed from the society on which he preys because he is bad and dangerous material. Experience has shown this situation also to be true in the habitual drug addict. It is as scientifically possible for human material to be intrinsically poor as it is for inert material to be so. Therefore I believe that birth control from both the standpoint of hygienics and eugenics is only a question of time.

The narrow conception of the sexual theory as a basis of the functional neuroses with psychanalysis as both a diagnostic and therapeutic measure has already broadened to the recognition that other primitive instincts such as self-preservation, fear, and the affective states and mental complexes arising from these may also and to an equal degree engender the psychoneuroses. Experience with the Great War cases showed that the psychoneuroses arose principally from the impossibility of escape from unbearable situations. An evident truth daily becoming more evident is that psychanalysis is by no means synonymous with psycho-therapy, if we are to judge by therapeutic results.

To fully understand abnormal processes a

necessary foundation in normal mental processes would seem to be essential. The scientist, with a mind unbiased by unsupported theory, creed or system of philosophy, cannot dissociate mental processes from brain activity, a physiological activity of brain matter. This conception has lately been given a concrete explanation by Dercum, based on our present knowledge of brain physiology. It is a step forward and serves as a timely and scientific refutation of the absurd conceptions of certain sects whose unthinkable dogma is exactly the opposite: there is no matter, no disease; disease is not material but is the creation of a worldly imperfect and fearful mind.

It is my earnest wish that all of us who are gathered here tonight may live to witness and take part in the progress of neuro-psychiatry in the next two decades. It is our great privilege to be active workers in that branch of medicine representing the highest specialized function of the human organism.

To my way of thinking there can be no greater service to mankind than to contribute towards its betterment, and when one has achieved such a result this must be his highest reward.

(909 Hyde Street.)

Standardizing Human Beings—Governor Miller of New York says that the rising issue in the country is the old issue of State's rights.

Perhaps. But it is very likely that another issue will interpose and demand a prior hearing. This issue will deal with the rights of individuals.

The movement to standardize machinery, mechanical processes and the products of manufacture have been attended, hardly observed, by a movement to standardize human beings. . . .

Laws that interfere with individual rights—rights that are exercised without harming society, neighbors or other individuals—have seldom been enforceable during the entire career of mankind. But such laws have been of service to certain elements the kinds that practice blackmail.

Legislators who aspire to get their names attached to new laws, professional reformers who have carried through a good reform and take up with anything that can be called a reform in order that their incomes shall not be cut off, foolish standardizers and half-cooked societies—these are forcing the revival of an issue as old as the hills. The issue will lead to a definite decision as to what rights an individual may exercise out of his own initiative without respect or reference to the tastes of other people, their prejudices, inherited customs or the standardizing associations to which they belong.—Detroit Journal.

Socialistic Tendencies in Medicine—Socialized medicine can no more succeed than socialized industry has succeeded. Its failure is as sure as its consequences are appalling. There can be no such thing as free dispensaries and free clinics—they are bought and aid for by every member of the community. They are expensive, as is everything conducted by the Government, and the care given by the State to the sick has been and always will be inefficient. Taxpayers have a right to protest against paying medical bills for those who are financially able to defray their own expenses. It is making liars and cheats of a number of people.—James A. Gardner in The American Medical Press.

POSTURE IN ITS RELATION TO NUTRITION *

By ALFRED EDWARD MEYERS, M. D., San Francisco
(From the Department of Pediatrics of the University of California).

It has been only within the last few years that serious attention has been given to the influence of defective posture on the health and efficiency of an individual or vice versa. And yet, one cannot help noticing that practically all malnourished children have atrocious postures.

The question which naturally arises is: "Is bad posture primarily due to malnutrition, or are the ill effects of a defective posture sufficient to contribute toward the condition of malnutrition?" Practically speaking, every child is born with a spine that can be developed to meet the various exigencies of life, and also a normal digestive system. In the case of the breast-fed infant, whose nourishment is sufficient to meet its growing needs, digestion proceeds in a normal manner. But when we consider some of the practices which are in vogue during infancy, the sins of omission as well as commission, it is quite obvious that the posture is at least the first to suffer. The average mother in holding, nursing, carrying, bathing and dressing her month-old infant handles it as if it were a plaster doll, and seems ignorant of the fact that she has much to do in the moulding of its little spinal column. She adds insult to injury when she allows her baby to sleep with a pillow, and often under a weight of covering that causes the child to perspire and holds its legs in the air, flexed at the hips. But perhaps her greatest offense is to make the child sit up or walk before its little muscles are strong enough to support it, and as a result, sooner or later, the little fellow is wearing a brace, or an operation is performed to correct the bow-legs or knock-knees, the result of a parent's lack of knowledge.

If the infant's diet happens to be an artificial one and is properly fed, his digestion probably will not suffer by the lack of attention to his bodily mechanics any more than in the case of the breast-fed child. It is only when the metabolism is upset because of a poorly balanced diet, or later suffers from one of the nutritional disturbances, e. g., scorbutus, pellagra and rickets, that the element of malnutrition comes in and forms a sort of vicious circle:

Rickets: Weak muscles and ligaments, crowding of the lungs, gastro—and enteroptosis, muscle-fatigue, malnutrition.

Muscles and ligaments that are weak fall short in their function of supporting the bony framework, and as a result various ptoses occur. In the condition known as skeletal ptosis, there is a downward displacement of the bones, shown by the drooping of the head, the falling in and down of the chest, and exaggeration of the normal curves of the spine. In visceral ptosis, which is usually associated with skeletal ptosis, there is a downward displacement or crowding of the ab-

* Read before the Fifty-first Annual Meeting of the Medical Society of the State of California, Yosemite Valley, May, 1922.

dominal organs, with unquestionably considerable alteration of function.

There are two periods in the life of a child in which deformities chiefly occur: early childhood, when the upright position is first assumed, and adolescence, when the rapid growth and other changes lessen the stability of the supporting structures. Emerson found that fifty per cent of the children of the Little Wanderers' Home, and seventy per cent of the patients who attended the Children's Outpatient Department of the Massachusetts General Hospital had defective postures. Probably the latter figure shows the real condition as it exists among children, inasmuch as every child who was referred to the Children's Nutritional Clinic of the University of California for underweight showed one or more of the following postural defects:

1. Exaggerated dorsal spine with round shoulders and forward head.
2. Exaggerated lumbar spine with protruding abdomen.
3. Functional and structural scoliosis.
4. Fallen arches or flat-feet.
5. Rickets (flaring ribs, Harrison's Groove).
6. Bow-legs, knock-knees.

Is it not about time that the physician included in his routine examination a closer observation of a child's statics, and not leave it to the realm of the specialists, as we are accustomed to do? It is just as essential, and probably more so, to true up the structural system of a child as it is to true up the various parts of an automobile. A child loses enough energy in a day without adding to it that constantly lost from maladjustment of his body.

What is a correct posture? The ideal posture is one in which all the muscles of the body work in closest harmony, with the least amount of friction, and with the greatest amount of efficiency. All authorities seem to agree that a child, in the assumption of a good posture, must keep his head up, chin level, chest high, shoulder blades flat on the back, abdomen in, back flat, legs straight, toes forward, and weight carried on the forward part of the foot. With such a position a vertical line, dropped from the front of the ear to the forward part of the foot will parallel the axes of the large segments of the body, and seems to coincide with a line which passes vertically through the center of gravity.

It is important to carry the head erect and the chin level because of its direct influence on the spine, chest and shoulders; it also affects the position of the stomach, liver and other abdominal organs, which are suspended secondarily from the neck. A collapsed chest means insufficient space for the organs of the chest to do their work efficiently. Round shoulders mean a decreased rib-cage. Woods-Hutchinson says "that one of the most important factors in the respiratory development and capacity of the human chest is the extent to which the scapuae come to lie upon the posterior wall." A contracted abdomen with its strong muscular walls holds in place the great organs of the trunk, and also aids the circulation of the blood through these organs. Exaggerated curves of the spine affect the diameters of the trunk and alter its proportions. Trunk capacity implies large organs and plenty of room in which they may do their work. Bow-legs and knock-knees put unusual strain on the ligaments, muscles and joints of the body, especially the sacro-iliac. Toeing out is one of the chief causes of flat-feet, due also to abnormal strain on the ligaments of the arch. Carrying the weight too far backward over the heels throws the whole body out of plumb and sacrifices the elasticity of the foot that saves jar in walking. Such a posture guarantees the minimum of muscular action, enlarges the rib-cage, raises the diaphragm, and thus gives to the abdominal viscera its maximum of space for normal functioning.

Incorrect Postures: For practical purposes there are four types of defective posture that need to be considered. The commonest of these is the position of fatigue, because it is the relaxed position which one is liable to assume temporarily when fatigued. The vertical line test shows that there are three main divisions of the body instead of one continuous vertical line as in the normal standing position. The second type of bad posture is one in which the lower part of the back is straight—the small of the back is obliterated. The head and neck are carried forward as in the fatigued position. The third type is the result of over-extension rather than flexion, and results in extreme lordosis. This, in addition to toes out, is the position we all assumed when we were told years ago to stand straight. The fourth type is seen by observing the child from the front or back, and is called lateral deviation or scoliosis. According to various workers scoliosis is present in from 15 to 25 per cent in all children with defective posture.

Factors Contributing to Faulty Posture: Inasmuch as the average person spends more time in sitting than in standing, every child should be taught that, to sit correctly the trunk must be perfectly erect or perhaps inclined slightly forward or backward, and not creased at the waist, which position interferes with the work of the heart, lungs and digestive system. Sliding down in the seat changes the tilt of the pelvis, increases the dorsal curve, and creases the waist. Sitting on one or both feet for any length of time shows its influence on the position of the spine. Prolonged standing, especially in one position, is probably one of the most muscle-tiring of the common everyday acts. The unrelieved strain put on the muscles, ligaments and heart soon leads to a permanent weakening, and as a result broken arches and other postural defects occur, a condition very common among housewives, street car conductors and motormen. The characteristic pose among children of shifting the weight to one foot is the usual outcome of prolonged standing, and in not a few cases is productive of constitutional harm. Walking is one of the best of exercises, especially if the movements of the body

are unimpeded. Every child should be taught that there is a right and a wrong way—that the right way is for the heel to touch the ground first, quickly followed by a transference of the weight to the ball of the foot; and that in bringing the heel down with any great force the elasticity of the step is lost and is replaced by a harmful jar throughout the body. There should always be some mechanical reaction to the movements of the foot or leg, as in the slight swaying of the arms at the side of the body. The same erect posture should be maintained in stair-climbing, a vigorous type of exercise, which stimulates circulation and deep breathing. But care should be taken in not subjecting a child with a potentially weak heart, even though it shows no murmur through the stethoscope, to the rigorous effects of climbing long flights of stairs.

One of the reasons, perhaps, why postural deformity is rare among quadrupeds is that they are free from the distorting influences of conventional dressing. For instance, notice the shirt and coat which are cut so high in the neck behind that they lie like the yoke of a harness across the cervical spine, thrusting the head forward. In addition to this, the wearing of suspenders or pinning the lower garments high up on the undershirt, pulls the shoulders forward, and helps gravity on its downward pull. Even the wearing of low socks, held in place by tight elastics, exerts its influence on posture, to say nothing of the bunions, corns, etc., the inevitable result of high-heeled, pointed-toe shoes.

Many of the common, everyday acts of children which if persisted in contribute their share in deforming the posture. How often we see little children, carrying their smaller brother or sister, who weighs nearly one-half as much as they do; or, as is a common sight among child labor, the poor little fellow who is burdened down with a heavy load steps into manhood with a serious handicap—a static deformity. The carrying of books to and from school probably does more in the establishment of an incorrect posture than any other school requirement. This disfiguring habit can be materially helped by dividing the load, carrying the books on alternate arms on alternate days, or dividing the load at the end of a strap, slung over the shoulders.

Sleep, like nutrition, is fundamental to growth and development. Too little attention is given in the individual home to the atrocious positions which many children assume while sleeping. To lie on the side for hours with the chin resting on the knees is anything but relaxation for the erector spinae muscles. Dr. Fitz says: "The period of sleep is one-half to one-third the growing time of the child, and consequently the pressures and strain of an habitual sleeping posture have an opportunity to influence the growth of the vertebrae and ligaments, and shape them in accordance with their relative position at such time." It is just as essential for a child to change its position during sleep as it is while in the standing position. The factors mainly responsible for a child assuming bad posture in bed are: A poor spring and mattress, high pillows, heavy bed-clothes, cold room, and cold sheets. The simple act of placing a hot-water bag at a child's feet will do much toward making him extend his legs and thus relieve considerable strain.

Relation of Posture to Efficiency: It has been established by statistical tests that physical or mental defect or weakness is in general accompanied by poor posture. The average record of pupils in the poor-posture group has been found to be appreciably lower than the good-posture group in attendance, in department, in physical activity and endurance, in manual training, and in commercial success after leaving school. The army appreciates the value of posture in the training of its soldiers. The exercises, drills, clothing, and sleeping paraphernalia are chosen with this fact always in mind.

Posture as an Expression of Intelligence and Character: The principle that underlies the adage: "Tell me what you eat and I'll tell you what you are" may well be applied to posture: "Show me how you stand and I'll tell you what you amount to." Members of the theatrical profession are the best examples of this fact. It is difficult to picture such men as Sothern and Mantell, in many of their leading roles, assuming anything but their fullest stature, while those with baser parts are always seen in cringing attitudes. The person who would impress, command, or inspire must stand correctly, must look up and not down, forward and not back, while the stooped, grovelling, and hunched-back set are usually the dregs of humanity.

Posture in Its Relation to the Body as a Whole: If we consider the human body to be the most efficient type of machine, why do we not give to it its proper amount of mechanical consideration. The life and efficiency of any machine depends upon the harmonious working of all its members, and just as the whole machine suffers when any one system is not working properly, so do our bodies suffer when they are out of alignment. Not only does the structural framework suffer, but the heart and lungs cannot carry on their normal function in a cavity that is encroached upon; the hampered excursions of the diaphragm, the sagging of the stomach and the colon with interference of their blood-supply, and the pressure of those organs on the kidneys and bladder are the indirect results of a defective posture.

Conditions Secondary to Defective Posture: We are just beginning to appreciate that the examination of a child's posture is as much a part of the diagnostic technique of the pediatrician as it is of the orthopedist. Unquestionably, much of the pathology attributed to focal infections would clear up under postural treatment. Likewise, a large proportion of the growing pains of childhood would doubtless disappear if we paid as much attention to statics as we do to diet. We are very easily convinced that such conditions as backache, legache, footache, painful shoulder, subacute arthritis, and even neuritis might be due to mechanical defects because they are directly referable. Why

is it not possible for conditions to arise that are indirectly due to poor bodily mechanics just as it is possible for a heart to enlarge indirectly from some particular cause? Talbot and Brown have shown that cyclic vomiting is usually the result of a visceroptosis, an accompaniment of poor statics. They have also noted that in such children there is an intolerance for fats. In our work on malnutrition we have observed that many cases of constipation, abdominal pain, poor appetite, and various gastro-intestinal upsets have absolutely disappeared just as soon as the child was taught to stand correctly. As Goldthwaite has shown, the sagging of the stomach and the intestines are sufficient to cause many disarrangements of the liver, pancreas, spleen, kidney and bladder, and rectum. Williams called attention to the prevalence of chlorosis in early adolescence, which he felt was due to tight dressing. Goldthwaite reports that in the examination of the American Expeditionary Forces, many cases diagnosed D. A. H. (deranged action of the heart) cleared up entirely when the patient was taught to stand correctly. Brown has demonstrated a decided decrease in the normal excursion of the diaphragm in patients with faulty postures.

Every case of lordotic or orthostatic albuminuria, which has been diagnosed in the Children's Outpatient Department, with the exception of one, which was complicated by obesity, showed varying degrees of malnutrition, ranging from 5 to 30 per cent under weight for its height, and all showed postural defects, especially in the lumbar curve. This condition was so constant that all cases of malnutrition showing faulty posture, but with no albumin in the urine, were given what might be called a "provocative test" for albumin; that is, were made to stand against the wall in a hyperextended position. This was accomplished by having the heels and head against the wall with a roll about six or eight inches in diameter in back of his lumbar spine. In practically every case it was possible to obtain in about fifteen minutes albumin, ranging from a slightest possible to a definite trace. Because of the frequent association of malnutrition and orthostatic albuminuria, we assumed that the passing of serum albumin in the urine was an important factor in causing, or, at least, maintaining the condition of malnutrition. The fact that the albumin disappeared after the application of a plaster of paris jacket and the child began to gain in weight faster than normally, lends weight to the fact that the so-called "functional albuminuria" deserves more significance than is usually ascribed to it. It may be argued that the rapid gain in weight was due to the change in diet and the correction of the posture, and yet, just as soon as albumin appeared in the urine when the cast became loose, even though it held him in a fairly good position, his rate of gain was appreciably less. Furthermore, when these children were treated from a dietetic standpoint alone, they did not gain, and those treated with braces alone showed a much slower rate of gain than when their diets were also corrected. Children suffering with malnutrition and defective posture, but with no albumin in the urine, responded favorably to this treatment.

Several cases of enuresis have been materially helped after a few visits to the physiotherapy department, one case reporting complete cessation of the habit after four periods. Grover reported rather satisfactory results from the application of hygienic measures in the treatment of enuresis, but if one will examine his principles of treatment he will note: "Nap at noon, no active play after 4 p. m. (with probable rest) and bed at 7 p. m." In other words, by increasing the periods of rest he decreased the periods of bad posture. Even a child's disposition will materially change from the effects of poor statics, causing him to be irritable, nervous, fidgety, and even incorrigible.

The question of mechanical treatment and directions for exercises lies wholly within other provinces, but the prophylaxis of defective posture is the pediatrist's work. Mothers should be taught the do's and don'ts as regards the handling of the child from the moment it enters the world until it leaves the parental fold. Teachers should know the value of good posture and how to help a child obtain it. The child himself should be taught that the maintenance of a good posture is one of the chief "rules of the game."

Physicians and Public Health—If public health is a purchasable commodity how much can a community afford? Some forms of health work some communities cannot afford; the question is to find out what can best be afforded and applied to secure practical results. For example, it would be perfectly possible to raise strawberries in the Arctic Circle, yet it has been estimated that each strawberry so raised would cost $11.40. The abstract theory of raising them there would be proved, but there would be no practical result.

Some foolish people have claimed that public health administration will do away with the need for the medical profession in private practice. Such a development can never come, and any plan, system, or propaganda which indicates that there will be a lessening in the importance of the medical profession as such, is fallacious. However, all public health efforts arising as they do from the practical results of private medical practice, must be based on the confidence, good-will and support of the profession.

Health commissioners cannot be public health despots. Their field is determined by their ability to grapple with concrete problems, and ability to co-operate hand in hand with the profession to which they belong.—George E. Vincent, President of the Rockefeller Foundation.

Though the world know me not, may my thoughts and actions be such as shall keep me friendly with myself. Lift my eyes from the earth and let me not forget the uses of the stars. Forbid that I should judge others, lest I condemn myself. Let me not follow the clamor of the world, but walk calmly in my path. Give me a few friends who will love me for what I am; and keep ever burning before my vagrant steps the kindly light of hope. And though age and infirmity overtake me, and I come not within sight of the castle of my dreams, teach me still to be thankful for life and for times' olden memories that are good and sweet; and may the evening's twilight find me gentle still.—Max Ehrmann.

EDITORIALS

WHO WON AND LOST THE ELECTION?

We are receiving many constructive communications and hearing some few carping comments on the chiropractic and osteopathic majorities at the recent election. Constructive communications are coming from institutions, organizations and representative members of the medical profession who did what they could to defeat the three destructive Initiatives Nos. 16, 20 and 28.

Those who were distinguished by inaction, indifference and lack of co-operation during the campaign are still distinguishing themselves by criticizing those who worked hard and unselfishly to keep the cults from lowering educational standards and removing vital public health safeguards. They are saying now, "Why were we not informed that the chiropractic and osteopathic Initiatives were so serious and we could have defeated them as easily as we defeated anti-vivisection."

Anti-vivisection was defeated by a larger majority on November 7 this year than it was at the general election two years ago. There is a law in California compelling all persons, committees, firms, associations or groups of persons who expend effort and money to influence the action of the electors for or against the adoption of any initiative, referendum measure or constitutional amendment to file in the office of the Secretary of State an itemized statement covering campaign expenses. Against the chiropractic and osteopathic and anti-vivisection Initiatives the only organization to file the statement required by law is the League for the Conservation of Public Health.

Records are therefore available which completely contradict those who try to claim credit for the victory on No. 28 and try to discredit others for the loss on Nos. 16 and 20.

For many months we have been pointing out the probability that the chiropractic and osteopathic measures would be adopted in California because the medical profession in many other States had allowed them to pass without opposition. Many people who have come to California from such States were unable to understand why the medical profession here should oppose cult measures which the medical profession did not oppose "back home."

In the May issue of the Journal we pointed out the serious character of the chiropractic and osteopathic Initiatives and urged all health departments, State, county and city, all hospitals, civic and fraternal organizations, women's clubs, insurance companies and welfare societies as well as all members of the medical profession to oppose actively No. 16, the chiropractic Initiative, and No. 20, the osteopathic Initiative. (No. 28 was not filed at that time but The League was campaigning against the proposed anti-vivisection measure which was filed in June.) We stated in that editorial with prophetic accuracy: "Few voters can spare the time to investigate the extravagant claims made by this aggressive chiro-osteo combination. *If those who are informed neglect to co-operate in broadcasting the facts and exposing the vicious character of these two initiatives, it is probable that quackery will win and create a chaotic condition in the field of medical, hospital and health work.*

The League for the Conservation of Public Health truly assessed the campaign strength of the cultists and informed by letter, by addresses, by interviews, by literature all those who are ostensibly interested in scientific medical practice and progress and public health work. A careful record has been kept of those who did and did not co-operate. This record tells who won and lost the election.

In a broader and truer sense the people of California lost the election and their loss will become apparent in the days to come. All the interest we had in the campaign, all that we did and all that the League for the Conservation of Public Health urged us to do was inspired by the permanent interest we have in maintaining and promoting all the agencies of modern medicine for the benefit of all. How seriously those interests will be affected was pointed out in the leading editorial of the October issue of the Journal entitled "Trafficking with Health."

A cursory glance at the election returns shows that a majority of the voters of certain sections of California preferred the irresponsible misstatements of the exponents of chiropractic and osteopathic colleges to the responsible statements of the President of the University of California, the President of Stanford University, the health officers, hospitals, nurses and others qualified to speak on educational and health subjects.

This revolt against Education as the basis of the scientific practice of the healing art is significant and will undermine all our dependable health agencies unless it is checked.

STANFORD'S MEDICAL MILLION

Stanford University is asking the citizens of California to add one million dollars to the endowment of her medical school and hospitals. They should have the million dollars, and every forward looking citizen should help them to get it. Contributing to an endowment of this character is not charity and it is not a gift; it is an investment in character building, better citizenship, better medicine and better public health, and will pay large and increasing dividends.

For the last several years more than two-thirds of the new licentiates of educated physicians of this State have been recruited by the importation from other States and countries. The normal annual replacement and expansion needs of the State for educated physicians is about four hundred of which the three schools of California supply about 110. We are importers of talent when we should be exporters of talent, as we are exporters

in so many other important lines. Many well prepared young men and women citizens of this State are forced to go elsewhere to get their medical education because of inadequate funds for the expansion of our own schools. This is not only expensive for the students and their families, but in the end it is expensive for the State. Of course, there always will be some of our students who will elect to secure their medical education elsewhere and some physicians from other States always will come to California to live and practice their profession. Both of these movements are necessary and desirable, but it should never be *necessary*, because of lack of facilities, for a Californian to go East to secure his education.

If California is to maintain her recognized place in scientific and intellectual practices and proceedures; if she is desirous of stopping retrogressive tendencies in medical public health and social welfare standards and thus enhance her prestige in other lines, enlarged medical opportunities are essential.

Individuals and small groups of citizens are endowing medical schools in several places in our country. Any one of a number of these schools has received, or is about to receive, more millions from a single person than are asked for from all of us by both the Stanford and the University of California schools. Medical education is expensive. It is constantly becoming more expensive. It is the hardest, most trying, most expensive in the time, energy and money of the student of any of the learned vocations. It cannot be otherwise. The studies constantly grow more difficult and no physician has ever been, or ever will be, over educated. One hundred per cent of them will tell you that they have not had enough. However, when viewed from the standpoint of a great State there are credits of incalculable value constantly being entered against the costs of medical education. The stabilizing influences on public opinion emanating from the faculties and laboratories cannot be expressed in figures but they are tangible to every thinking person. The returns in safety in commerce, quarantine, industry, other professions and home life are more tangible and more appreciated. As a single example the saving to the people of this State by the researches of the two medical school faculties in pointing the way to the olive industry during their recent difficulty, means many millions in dollars and in useful lives saved. The extension and fine service of the teaching hospitals and their various life-comforting and life-saving auxiliaries is known and appreciated by untold thousands of our citizens, who otherwise might be unable to secure all that they required.

The medical profession of the State always has wanted to see San Francisco and Los Angeles as two great medical centers. Our schools are of the best, but they have not been able to expand and become the Meccas they are entitled to be. We ought to be the stopping places as we are the gateways for all the countries and millions of people of the Orient and Far East. For years past, and even at present, they are using us as medical gateways but not enough as stopping places. All we need is endowment and the application of the well known California idea as expressed in other activities and the gateway will be converted into an intellectual, social and even financial harvest. As President Wilbur has said, Stanford's medical mission endowment is the problem of every loyal, forward looking Californian. When the time comes for a similar campaign by the University of California Medical School and hospitals, that also will be our problem. Let us make the gateway lead into California's fertile fields and as East is both directions from this gateway, let us open it straight up.

STUDIES IN CLAY

Barnum's statement about "one being born every minute" is being most exquisitely demonstrated by the use of "beauty clays." The increasing variety, volume and extravagance of the advertisements of the "virtues" of clay and mud as beautifiers of the skin indicates a large volume of profitable business. It takes many sales of dirt, even at ten dollars a pound, to pay for the extensive advertising now being displayed. According to the claims of some of the gentry who deal in clay, this beautifier promises to make Cleopatras of all and sundry and, what is of more interest, it promises to injure the toilet soap business. We have been requested in letters to say something about this fad. There is only one phase of it that is important enough to notice. If we must use clay as a skin beautifier, why don't we use California clay; market it by California business men and thus save all the profits in sales and advertising to our own community? Gentlemen of the Chamber of Commerce, we offer you the opinion that there is a fortune in California clay if you will act quickly before some other "beautifier" is "discovered."

COLLECTION AGENCIES

A number of the members of the California Medical Association have requested that we call editorial attention to this subject. There are undoubtedly perfectly good reliable collection agencies in California handling physicians' accounts. It is also a fact that there are a number who are unreliable and, in certain instances, probably dishonest. Every physician should be extremely careful of the standing of the firm to whom he delivers his accounts for collection. Once these accounts are in the hands of an agency it is exceedingly difficult by process of law either to get the accounts back again or to enforce payment by the agency of fees already collected.

The JOURNAL carries the advertisements of two collection agencies that have been recommended by members of our organization. The JOURNAL would appreciate letters of commendation or criticism regarding any agency engaging in this line of business in this State. Letters will be treated as confidential at the request of the writer.

THE 1923 MEETING OF THE MEDICAL SOCIETY OF THE STATE OF CALIFORNIA

Important questions relating to the meeting of the State Society for 1923 have been seriously considered by the Publicity Bureau, the Council and the State Program Committee, in conference with the Section officers of the Society. The outline of the results of these discussions is published on page 411 of the November number of the JOURNAL.

The 1923 meeting will be held in San Francisco, Friday and Saturday, June 22 and 23, preceding the annual meeting of the American Medical Association, Tuesday to Friday, June 25 to 29, also in San Francisco.

The State Society Meeting

1. Meeting of the Council—Thursday evening, June 21, 8 o'clock.
2. General Session of the State Medical Society —Friday morning, June 22, 10 o'clock.
3. Section Meetings (each section to meet separately)—Friday afternoon, June 22, 2:30 o'clock.
4. Meeting of the House of Delegates and Meeting of the Council with Officers of County Societies and Section Officers—Friday evening, June 22, at dinner. This meeting to continue until all business of the House of Delegates has been transacted.
5. General Meeting (the League for the Conservation of Public Health)—Saturday morning, June 23, 10 o'clock.
6. Meeting of the House of Delegates—Saturday afternoon, June 23, 2:30 o'clock.
7. Meeting of the Council—Saturday evening, June 23, at dinner.

The State Program Committee, in conference with the officers of the various sections, decided at their meeting on September 9, 1922, that each Section of the State Society should hold one meeting, on Friday afternoon, June 22. At this meeting there is to be read, by title only, as full a program as the officers of each Section care to accept. At this meeting also will be transacted the usual business of each Section, such as election of officers, resolutions and other problems. The rest of the time of the meeting may be taken up by the full presentation and discussion of such leading papers as the Section officers may select for that purpose.

The State Program Committee will arrange the program for the General Meeting of the State Society on Friday morning, and the League for the Conservation of Public Health for the meeting on Saturday morning.

The State Program Committee wishes to announce at this time that the final program will go to press on March 15 and will appear complete in the April issue of the JOURNAL.

All persons desiring to present papers by title and for subsequent publication in the JOURNAL as having been read at this meeting of the Medical Society should communicate promptly with the officers of their particular Section, and the officers of all of these Sections (of which there is a directory in every number of the JOURNAL) undoubtedly will communicate with members of their Sections, in order to arrange for as satisfactory a program as possible.

The State Program Committee does not place a limit upon the number of papers which may be presented by title to each Section. The Section officers will determine the number and qualifications of the papers presented to the Section by title, and they will also determine what papers and how many will be presented in full at the one meeting of each Section. The editor of the JOURNAL announces that about 160 Section papers of 4000 words or less each can be used between the 1923 and 1924 meetings of the Society. This in addition to papers of the general sessions and some read before county societies will take all of the available space of the present enlarged JOURNAL for one year.

Office headquarters for this meeting, as well as for the American Medical Association meeting, will be in the Balboa Building. The Palace Hotel has been designated headquarters hotel for the A. M. A. meeting, and will be considered hotel headquarters for the State meeting. The place of the general meetings and the Section meetings of the State Society will be announced later.

PHYSICIANS' BIOGRAPHICAL RECORDS

The office of the State Society is making an effort to improve the biographical records of our members and of all physicians in the State of California. Worthwhile data has been accumulated in very large amount both through co-operation with the physicians themselves and through the press clipping bureaus.

Among other things we would like to have would be reprints of all articles published by our members. If every member will mail now a reprint of articles he has published heretofore, and in the future of each article as it appears, these reprints will be filed in his personal record folder. All physicians, therefore, interested in having their records complete are requested to send to the secretary reprints of such articles as they have published and to put the secretary of the State Society on the mailing list for reprints of all future articles. Reprints of articles by members of the State Society will be acknowledged in the JOURNAL.

JUVENILE DELINQUENCY INCREASING

The Police Department of San Francisco recently gave out some statistics showing a decided increase in the juvenile delinquency in the city. It is reported that arrests among boys and girls, from ten to twenty-one years of age, average eight or nine a day. Thirteen per cent of the criminals in San Quentin Penitentiary are under the age of twenty-one. If these statistics are accurate, and there is no reason to question them, it is time for physicians, public health officers and other citizens interested in better health and better home conditions to seriously consider the cause of this situation. It would also be very interesting to know what the general situation is throughout the State and whether or not juvenile delinquency and crime is increasing only in certain cities or in rural communities as well.

INDEX FOR THE CALIFORNIA STATE JOURNAL OF MEDICINE FOR 1922, VOL. XX.

With the endorsement of the Publicity Bureau, this index is prepared along the lines used in the Index Medicus, the Library of the Surgeon-General's office in Washington, and the Journal of the A. M. A. With an author index of this character, it is easy, by consulting subsequent editions, to establish the bibliographical record of any of our members, and this will become exceedingly useful in the years to come.

This volume of the Journal has not been indexed by subject for the following important reasons: a subject index is expensive to prepare and to publish. It ought not to be necessary because of the very thorough and complete indexes contained monthly in the Index Medicus and issued quarterly by the A. M. A. in the Quarterly Cumulative Index to Current Medical Literature. This latter publication constitutes one of the extremely valuable services of our national organization. The four volumes, issued every year, give the index to all worthwhile medical literature from all journals in the world. It is well done and the subscription price is nominal.

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On the Treatment of Syphilis With Bismuth Salts—Sazerac and Levaditi of the Pasteur Institute, Paris, have recently proposed the use of tartrobismuthate of potassium and sodium, containing approximately 50 per cent of bismuth, for the treatment of syphilis. In their preliminary work on rabbits (infected with Spirochaeta pallida and S. cuniculi) they found that the only safe and efficient method of administration was by the subcutaneous or intramuscular route. Intravenous injections were shown to be dangerous on account of the markedly toxic action of the drug. In order to decrease this danger as far as possible they substituted a suspension in oil of the drug for the watery solution. This was found to be the method of choice in the treatment of human cases on account of increased tolerance and less local reaction.

Fournier and Guenot have tested the value of this treatment of syphilis on a comparatively large scale and report the results of the treatment in about 200 cases.

In cases of primary sores the treponema disappeared as a rule after the second injection; in some cases even after the first. The small erosive chancres healed completely in a few days; the medium sized chancres in one to two weeks. The large or ulcerative chancres persisted about three weeks, but they lost rapidly their specific characters and soon appeared as ordinary lesions, the time of healing depending on the size of the individual ulcer.

The local induration and the adenopathy were influenced more rapidly by bismuth than by any other treatment and disappeared often completely within a few weeks. In no cases where the treatment was regular did secondaries appear. The Wassermann reaction became negative and remained so for the period of observation.

"In cases of secondary syphilis the mucous patches disappeared after the first or second injection. The hypertrophic patches dried up in a few days, faded and were reabsorbed in ten to twenty-five days, according to the amount of new tissue formation. If the treatment was commenced during the appearance of the roseolar rash this was arrested in its development, sometimes after an exacerbation of twenty-four hours. Herxheimer's reaction might also appear near the papular syphilides. The simple roseolar rash usually disappeared in five or ten days; the papules took a little longer to be absorbed. The authors have seen a generalized miliary eruption and palmar syphilides, manifestations which, as is well known, are rebellious to specific treatment, disappear in two weeks.

The general secondary manifestations—headache, bone pains, etc.—always yielded to the first injection.

The authors mention eight cases which had not yielded to arsenical and mercurial treatment, but which readily responded to the bismuth treatment. They also had a case of acute syphilitic meningitis with all the characteristic symptoms. After four injections the clinical improvement was complete. After two weeks of treatment the lymphocytes in the spinal fluid had been reduced from 400 to 7 per cubic millimeter.

Lesions of tertiary syphilis, bumata, osteoperiostitis and ulcers yielded, as a rule, very rapidly to treatment. In cases of visceral and nervous lesions the time allotted to treatment has been too short to enable the authors to express an opinion.

After the first two or three injections of 0.20 gram, a bi-weekly injection of 0.30 gram seems to be good practice. Two to three grams should be injected during a month.

After the first series of injections the treatment could be continued with a single weekly injection of 0.20 to 0.30 gram, or be suspended for a month to be recommenced again in the same manner as described above.

One should follow the progress of the treatment by repeated examinations of the blood and check up every case at subsequent regular intervals.

With regard to untoward effects of this treatment the authors state that they have given over 1500 injections without having experienced any really important mishap.

In cases of grave visceral lesions, and especially where the renal function is impaired, one should proceed with caution. A slight elevation of the temperature was seen in some cases the day after injection, accompanied with pain in the back, but no general reaction was observed. After the first four injections a moderate polyuria occurred in a few instances. The only two manifestations that might cause some trouble are local reactions and the stomatitis. The former were seen in a few patients who walked too much immediately after the treatment. The tendency to stomatitis can be very well controlled by hygienic measures of the mouth. In a few cases dark spots of bismuth impregnation were seen on the mucous membrane of the mouth.

The bismuth has been recovered from the blood and cerebrospinal fluid and has been shown to be eliminated through the saliva, bile, feces, sweat and urine.

The authors state that bismuth undoubtedly is a most energetic anti-syphilitic agent, having particularly marked effect not only on the infectious manifestations of the disease, but also on the Wassermann reaction. They conclude, however, that time only will tell if this drug will prove to be of value in the radical cure of syphilis.—United States Naval Medical Bulletin.

CORRECTION

In the article on "Intra Vitam Bone Marrow Puncture in Pernicious Anemia," by Falconer and Morris (published in the November Journal), the statement was inadvertently omitted by the authors that the work was from the Medical Department

IS SUBSIDY CONTROL OF MEDICAL EDUCATION A MENACE?

Surgery, Gynecology and Obstetrics recently published the address of Dr. John B. Deaver, delivered before the College of Surgeons. He said: "We who are doing the world's work must see to it that our influence in this respect is not usurped by those who sit at their desks and think out specious arguments, fortified by vast financial power placed at their disposal by well-meaning men who are not themselves qualified to judge in this sphere, but must be guided by advisers who are not always infallible. I am thinking of the recent furore in favor of the full-time teacher in clinical branches. I am musing over the creation of great clinicians overnight by the feat of powerful influence. I am impressed by the rapid metamorphosis of the fledgling, nurtured, shielded, not to say mentally confined within the limits of sympathetic institutions and departments. I am not questioning the motives of the originators of this audacious movement, but I am watching for its results—not too brilliant thus far and promising less. I am concerned for the students, and would be alarmed for the profession were it not for my great confidence in the sober sense of that great body of a democracy such as this, which will eventually work its way towards its own proper method of dealing safely and sanely with conditions. Still I marvel at that new super-intelligence, which in rapid pursuit of its ideal, sets aside the principle of natural selection, the well-proved motive of human endeavor (high reward) and the cardinal virtue for the attainment of practical results—experience. In my heart I am thankful that such men had no voice in the selection of a generalissimo for the allied armies, and I note with curious reflection that the vast resources upon which the idea floats were not obtained and are not conserved by similar fancies.

"During the last five years, as you know, the tendency has been toward the full-time clinical teacher. Its central idea was good, but its application, begun before the war, if I mistake not, was influenced by the German idea of efficiency, which, as you all know, failed utterly to include the human element in its equation. Without wishing to appear reactionary, but with the interest of the profession in mind, I do not hesitate to say that I doubt the wisdom of the present course. It is an extreme, and the pendulum must soon swing in the opposite direction. The professor of clinical branches should not only be allowed, he should be obliged, to be in direct professional contact with the public. The science and art of surgery are one and inseparable. There can be no art that is not based on science, and there is no science without its practical application. Of the chaste union of the two shall spring the fruit of the tree of life for the untold millions, born and unborn, whose lives and whose happiness shall depend upon sane surgical science and safe surgical skill. Science has been kept sane only by constant contact with observed and demonstrable facts, like the giant who renewed his strength by contact with mother earth. Practice is kept sane and free from danger of the rule of thumb only by a constant infusion of science. The problem of today is to avoid conflict between these essential elements of a real union, to provide for their proper function, to inculcate into the minds of the young the true conception of their relations and responsibilities, and to deliver to society the greatest good to the greatest number. The last consideration is the most momentous one, for it means results, and it is by results that we shall justly be judged.

"We must deplore, therefore, anything which detracts from that high standard of service to the community which the community has a right to demand, in view of the extraordinary freedom and power which it has conferred upon us. It is our profound belief that the system of full-time salaried chairs for the clinical branches which has been forced upon a number of our foremost institutions by powerful influences is not only contrary to the spirit of American institutions, and contrary to the proper workings of the human mind, but that it is sure to result in degeneration of that art which is the true flower of science, and in the deterioration of the instruction to the student in how to deal effectively with the problems which he must confront in his chosen life work. To me the plan smells of the midnight oil of the theorist (to say nothing of the oil which has lubricated the ways for its launching). It has in it none of the red blood of the real administrator working to get results with humanity as God made humanity. In its application as I have witnessed it the plan shows no appreciation of the fact that the head of a clinical chair must be a clinician. Is not the clinical art also a science? Does it not rest upon knowledge and does it not depend upon aptitude, ability, experience and hard work? Can anyone become a clinician by merely calling himself by that name? Does appointment to a professional chair make him a teacher? Or is it no longer true that in addition to knowledge, which is not so common a possession, the successful department head must have qualities of personal integrity, stimulating personality, and administrative ability?

"In attempting to remedy the evil of the clinical professor overloaded with private practice and neglecting his teaching, his department, and his scientific work, these men of admirable intentions have gone to an equally unjust extreme. Orderly evolution was going on, even rapidly, if one considers world movements; but it apparently was not rapid enough for those who seek to reach the heights in a bound. But this is the day when the professor may try his theories on the whole human race, and the Pied Piper of Hamelin has his counterpart in Russia and would-be imitators everywhere.

"If I mistake not, there are signs of returning sanity. The domination of those who have shown their inadequate grasp of the whole problem is being loosened. Let us hope that the education of our youth will be entrusted to men who are outstanding figures in the field which they are presenting to the impressionable mind. Let us all fully realize that science is the beginning of practice, and that practice is the goal of science."

THE GORGAS MEMORIAL FUND

At the St. Louis annual session the Board of Trustees reported to the House of Delegates that in response to a request received from the directors of the Gorgas Memorial Institute of Tropical and Preventive Medicine for the co-operation of the American Medical Association, the Board had taken action which resulted in the appointment of a committee, representing the American Medical Association, to act on the project. The following were appointed: Charles W. Richardson, Washington, D. C.; Fred B. Lund, Boston, and George E. de Schweinitz, Philadelphia.

The House of Delegates unqualifiedly endorsed the Gorgas Memorial as a tribute to a past president of the Association and one of its most distinguished and loved members. At its recent meeting the executive committee of the Board of Trustees received the following statement from the committee and directed its publication:

Statement and Appeal for Co-operation

As a result of the stimulating suggestion of President Porras of Panama, it has been resolved that a fitting memorial shall mark the humanitarian service of the late Major General William C. Gorgas, and the beneficent influence of his life and work on mankind throughout the world. Following the thought of President Porras, it has further been decided that this memorial shall take the

form of a scientific institute for the study of tropical diseases and of preventive medicine.

No better place could have been selected than Panama City, the gateway between the Atlantic and the Pacific, where General Gorgas' well-planned and executed work made possible the building of the Panama Canal.

It is hardly necessary to call the attention of the medical profession to the far-reaching effects of General Gorgas' work on the welfare of the people of the whole world, especially in tropical and semi-tropical climates, and in all places subject to the inroads of infectious disease.

We of the medical profession remember him as our Surgeon-General during the early part of the World War. We remember his prompt recognition of the necessity of bringing into active service large numbers of physicians and surgeons from civilian life. We remember his genial and kindly nature, his high character, and his steadfast effort directed toward the organization and equipment of the Medical Corps of the Army. We remember the patriotic response. We remember him as a great sanitary officer, to whom we wish to pay a lasting tribute.

A central committee has been formed, with Admiral Braisted, retired, ex-president of the American Medical Association, as its president. The American Medical Association has appointed a committee of three to work in accord with the central committee, and through its members this appeal is made to the American medical profession.

The plan is to build at Panama an institute for the study of tropical and infectious diseases, with a hospital, laboratories, departments for research and all other facilities required in an institute of this character, erected and administered according to the most progressive, modern ideals. The Panamanian Government, owing to the far-sighted, philanthropic vision of President Porras, has donated the great Santo Tomas Hospital, and also the ground on which it is proposed immediately to construct the buildings as they have been described. Dr. Strong has been appointed the scientific director.

In conjunction with this work in Panama, there will be established in Tuscaloosa, Ala., the Gorgas School of Sanitation for the purpose of training country health workers, sanitary engineers, and public health nurses, especially educated to deal with the problems peculiar to the Southern States.

An endowment of six and one-half million dollars will be required to enable the institute to carry on the work according to the plans which have been formed.

The Republic of Panama has demonstrated its sympathetic and practical interest in this enterprise with splendid liberality. The physicians of our country, and especially the members of the American Medical Association, surely will not disregard the memory of a former president, and will seize the opportunity to make in this respect a contribution of which they will be proud.

The campaign for funds is to be international. A large response is expected from North, Central and South America, since the nations of these countries have been the chief beneficiaries of the labors of General Gorgas. It is fitting that his co-workers of the American medical profession should be requested to respond generously to this appeal. It is hoped that every member of the American Medical Association will make as liberal a subscription as possible. Any sum will be gratefully received. Checks should be drawn to the order of the "Gorgas Fund" and should be mailed to the American Medical Association, 535 North Dearborn street, Chicago.

CHARLES W. RICHARDSON, Chairman,
Washington, D. C.,
F. B. LUND, Boston,
G. E. DeSCHWEINITZ, Philadelphia.

THE PUBLIC PRESS AND THE PHYSICIANS

It is interesting and instructive for physicians to note what the public is thinking and saying, particularly as appears in editorial comment by important newspapers. A meeting of the A. M. A. in St. Louis was the occasion for considerable amount of newspaper discussion of physicians and medical affairs from which we quote a few extracts.

The St. Louis Post Dispatch says: "A transition from individual to organized practice already has begun, and that the movement is rapidly spreading. This means that the progressive leaders recognize the profession's obligation to the public in fighting disease, regardless of the effect on private practice. They regard the benefits of medicine as belonging to humanity and not to the doctors. . . . With the profession under such leadership as Dr. de Schweinitz and his supporters, the public will feel no misgiving toward the organization of men who, more than any other group of equal number, hold in their hands the power of human life and death. The public, moreover, should ally itself with this organization to stamp out quackery and drive from the profession elements that would exploit the people rather than assist them to health. It can do this by fighting such measures as that put over by the last Missouri Legislature to grant physicians' licenses to applicants who pass a State examination, regardless of their education and training."

The Globe-Democrat prints the following: "Doctors are our modern father confessors. Men and women go to them who formerly went to the clergy. They have earned and they have received the confidence of all who are in trouble about their bodies, and of many who are in trouble about their souls. No one can speak too gratefully of the way in which the work is done, of the skill, the kindness, the understanding and sympathy, even the toleration of human weakness on the part of the medical profession. Nevertheless, I put this question: Does the medical profession as a whole take its proper part in guiding and influencing public opinion in these matters wherein it alone can speak with authority?"

Under such headings as "The Family Doctor," "Too Many Specialists," "G. P.'s and Specialists," editors over the country plead for the return of the "all 'round family doctor" or defend the development of specialization in medicine, according to their several viewpoints.

The Denver Times wants the old-time general practitioner and family doctor restored to the place which he once occupied in the esteem and affections of the public. "Specialization has run riot in medicine during the last ten years," says the Times, and "it is time for the old family doctor to return, the physician who was not only well grounded in medical knowledge and trained in the school of varied experience, but possessed of common sense and genuine humane sympathy." The editor of the Western paper, a very smooth writer and a hard hitter, insists that "versatility in medicine is much to be desired," and thinks that specialists are inclined to be "single trackers," who know little outside of their especial fields. Admitting that specialists have done much to improve technique and to advance the cause of medicine, the Denver editor decries the growth of specialism and says "the present tendency carried to its logical conclusion, means that every man must employ a corps of specialists to look after the health of his family. It is fast coming to this unless steps are taken to develop the general practitioner anew and to stop the influences which have weakened confidence in his judgment and ability."

The Hartford Times is for the specialist and for the general practitioner, too, with an apparent leaning toward specialization as offering more than can otherwise be had for the public benefit. "The old-time family physician," who let the children play with his watch chain and who gave them enormous

doses of calomel and whisky and quinine for almost anything, "got away with it," but knew surprisingly little about the human body. On the other hand, he often knew more about the human soul than does the learned specialist of today, and was able to boom his patient back to health by sheer force of personality. Just as many times, however, he was unable to function at all and was pitiably helpless in situations which today seem relatively simple to the medical man. There cannot be too much specialization in medicine and, just as truly, there cannot be too much of the friendly sympathy of the old-time family physician. . . .

The Fall River Globe defines State medicine as "any form of medical treatment provided by the Federal, State, county or city government." The Globe makes it clear that the doctors do not oppose State control of communicable disease, nor treatment and care of the indigent and the insane, nor preventive measures initiated by the State for public health, and then agrees that "there is, as the doctors maintain, too much of a disposition on the part of the State to take up work with which it should have nothing to do in an active way. And as the doctors declare, the State's paternalism is sure to result in community irresponsibility." . . .

The Courier opines that the "continual, constant coddling, nursing and babying of the individual by the group is the most dangerous tendency in American public life of today. We are making weaklings out of individuals, undermining the national character, taking away the need or necessity for self-reliance, and teaching old and young to believe that it is somebody else's job to look after us."—Abstract from American Medical Bulletin.

Nutrition in Schoolchildren—Taliaferro Clark, Washington, D. C. (Journal A. M. A., August 12, 1922), reviews this subject on the basis of previous reports made by others, and points out that nutrition is a matter of general education and of change in community custom and habit, involving time, and of State and Federal guidance. It is not merely a question of weighing and measuring. So serious are the demands made on the time of both pupils and teachers by those engaged in, or wishing to engage in, sundry forms of welfare work, and by others with newly devised schemes for the general uplift which they wish first to try out in the schools, that any great extension of such activities, it seems, will leave but little time for instructions in the three R's. It is for this reason that all basically related forms of school health work should be united and harmoniously fitted to the general plan of health instruction and health supervision, utilizing the combined wisdom of both the educational and health authorities for such purpose. Courses in health should be prescribed and given weight in the school curriculum corresponding to major subjects. Such instruction naturally should be adapted to the intellectual capacity of the different age groups. As regards nutrition, teaching in the early grades should be concerned more with the importance of milk, vegetables, fruits, cereals and the like, in the diet, from the standpoint that they help to make the child grow up to be strong. The teaching of the principles of nutrition and nutritive values should be reserved for the older grades. Instruction in nutrition should not be reserved for and given only to a special group of children, either underweight or otherwise, but should include all children attending school. Special nutrition classes for malnourished children are unnecessary in a well-conducted school system providing proper health supervision. Weighing and measuring should be considered a necessary measure in every physical examination, and, in the case of children who fail to gain or lose weight steadily, the causes should be investigated and corrected. The character of the school lunch should receive careful attention, especially in rural schools, where many children frequently come long distances after a hurried breakfast, bringing a hastily prepared, poorly selected lunch, or none at all, and remain all day. Aside from the question of the effect on health, an underfed child is no more fit for mental effort than is the laborer for physical tasks. Clark also calls attention to the apathetic, and, in many instances, indifferent attitude of the medical profession to the danger signals that have been so prominently brought to the front by the lay workers, and urges the importance of physicians displaying more active interest in nutritional problems and giving more hearty support and co-operation in solving them.

Nursing Education in Michigan—In Michigan the battle wages merrily as to whether the University shall establish a separate department of nursing which shall be entirely independent of the medical profession. The Journal of the Michigan State Medical Society says that some of the self-appointed leaders in the nursing profession, in discussing the subject, have said, "We are not going to take orders from the doctors, and henceforth we will perform our nursing service under our own direction and not under the direction of the doctor." As we understand the plan, which, by the way, has been proposed by the Rockefeller Foundation with a one-million-dollar endowment as the bait to bring about acceptance, the University is to have a department of nursing, which is just as distinct a department as is the department of medicine or law, and it is to operate independent of any other department. The final product turned out by this department is to be a "super-nurse," or one who is supposed to possess knowledge greatly in excess of the knowledge possessed by the ordinary trained nurse who has had the advantage of contact with patients and members of the medical profession, though the super-nurse is not required to have any such fundamental knowledge.

As has so well been stated by leading medical men and medical publications in this country, there is little need for "super-nurses," and certainly no need for the fifty thousand proposed by the Rockefeller Foundation.—Editorial, Indiana State Medical Journal, October 15, 1922.

Extension Lecture Service in Physiotherapy—By co-operation between the California Association of Physiotherapists and the Section officers of the State Medical Society, the following extension program will be available any time after January 1, 1923, for county society meetings:

1. The Correction of Static Deformities by Exercise—H. H. Markel, M. D., (with moving pictures).
2. The Mechanics of Posture and the Posture Examination—Sarah R. Davis.
3. Physiotherapy in the Treatment of Heart Diseases of Children—Edith Bronson, M. D.
4. Physiotherapy in Back Injuries—E. W. Cleary, M. D.

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THE NOSTRUM AND THE PUBLIC HEALTH AND TRUTH IN ADVERTISING DRUG PRODUCTS

The American Medical Association, through its Propaganda Department, is continuing the splendid work in exposing nostrums that are being advertised and sold to the public. The Journal is in receipt recently of four new publications of this department: "The Nostrum and the Public Health and Truth in Advertising Drug Products"; "Obesity Cures"; Epilepsy "Cures" and "Treatment"; "Female Weakness Cures."

Arthur J. Cramp, Director of the Propaganda Department, in opening a discussion of The Nostrum and the Public Health, says: "Broadly speaking, the nostrum belongs in one of two general classes; one class comprises those unscientific mixtures that are advertised primarily to the medical profession, and first reach the public by way of the prescription; the other class includes those mixtures that are sold direct to the public. Nostrums in the first class are sometimes spoken of as 'proprietaries'; those in the second class are colloquially known as 'patent medicines.' The public suffers from both classes, the only difference being that in the case of the former the physician has to share the responsibility with the nostrum exploiter. There is no clearly defined line of demarkation between these two classes. Many of the 'patent medicines' of today were the 'proprietaries' of yesterday. Shrewd manufacturers—or, more correctly, exploiters, for many of these products are not manufactured by those that sell them—discovered years ago that one of the least expensive methods of introducing a nostrum to the public was by way of the medical profession. After the profession had been widely circularized and much space bought in the advertising pages of medical journals of a certain type; after uncritical or unthinking physicians had prescribed the products (of course in the 'original package' with the name blown in the bottle or a monogram stamped on the tablet); after the patient had learned with disgust that his physician had merely prescribed a 'patent medicine' that could more cheaply have been purchased direct—then the one-time 'proprietary' threw off its 'ethical' mask and became frankly a 'patent medicine.' Such has been the genesis of many a 'patent medicine' on the market today. Others, less deviously, have gone directly to the public at the outset."

Cramp classifies advertised drug products in four groups:

Group 1. Non-proprietary pharmaceuticals; official or semi-official in character.

Group 2. Scientific proprietary products advertised to the medical profession for prescribing and dispensing purposes.

Group 3. Unscientific proprietary products nominally advertised to the medical profession for prescribing and dispensing purposes.

Group 4. Proprietary products advertised to the public as home remedies for the self-treatment of disease; colloquially, "patent medicines."

The article explains in an interesting and informative way the abuses of public confidence that freely happen in advertising these products. The preliminary article is summarized by Cramp as follows: "Summed up, it may be said that the advertising of non-proprietary drug products is invariably truthful and conservative; the advertising of scientific proprietary drug products sold for prescription purposes only also, in general, conforms to the truth, with occasional lapses due to overenthusiastic copywriters. The advertising of unscientific proprietary products offered nominally to the medical profession, but virtually to the public, is invariably exaggerated and misleading and, in some instances at least, fraudulent. The advertising of proprietary products offered directly to the public, that is, of so-called 'patent medicines,' is notorious for its untruthfulness, not alone in its declaration, but also in its inference."

It is part of the duty of a conscientious physician to know what his patients are taking and doing that is not prescribed by him. Careful reading of pamphlets put out by the Propaganda Department will be of use in this respect, and will also enable the physician to discuss intelligently with his friends the meaning of some of the new methods of advertising.

Disgusting Propaganda About Tooth Pastes—We take this opportunity to announce the arrival of another cure-all tooth paste. We are requested to prescribe it to our patients, and are informed by the dapper distributor of samples that he, as well as the president of the company, believes that this particular paste will add to the calcium content of enamel. No mastication, no insalivation, no digestion, no assimilation, nor metabolic changes of the good old sort, whatever, are required. Like a sponge, the enamel of the tooth just naturally soaks up the calcium contained in the paste (this action being simplified, of course, by the fact that the enamel of the tooth is only about 98 per cent inorganic matter), and builds the free calcium into the tooth structure with the same expediency with which a swallow builds a mud nest under the eaves of one's barn.

Viewed from the standpoint of our present knowledge, it would seem as probable that one's flatiron could absorb starch, and then relinquish it in sufficient quantities to starch one's shirt while it is being ironed (that is, of course, providing one wears such a garment), as it would be for the enamel of a tooth to take up calcium from a tooth paste in the mouth, and store it away for the purpose of resisting decay at some future time.

Besides all this the preparation is a "delightfully refreshing dentifrice" (which is rather wholesome information, all things considered), "remarkable for the quickness with which it removes film and tartar."

This available supply of calcium is supposed to prevent tooth decay "which is a process of decalcification." Just how this replenishment of calcium is brought about we do not know, unless the bacteria involved in tooth decay get loosed in the presence of the calcium and become primarily builders, instead of destroyers, of tissue, which would bring them under the category of trained animals, establishing thereby a precedent for bacterial metamorphosis.

We, as dentists, are urged to prescribe this preparation to our patients with apparently the same reckless abandon that is employed by a high school girl when ordering soda-fountain beverages, thereby spreading a propaganda that seems to have been put out wholly and purposely to increase sales rather than to be based on any unusual merit of the preparation.

We hope that the day is far distant when we will be convinced that the human mouth has degenerated its functional activity until it has become a chemical laboratory or experiment station for the sole purpose of expediting the action of tooth pastes and their consequent exploitation as well. Should this unhappy condition ever exist, we will gladly call upon our surgeon to construct for us another mouth, perhaps on the back of our head (where so many mouths would look better anyway), and we will cheerfully vacate and dedicate our present oral cavity to experimental purposes for the use of certain manufacturers of tooth paste.

In the meantime we will continue to employ our knowledge of chemistry, physiology, bacteriology, the needs of the patient, the results of our experience, and perchance some horse sense, in the conduct of our professional duties, rather than to base our actions on sales talks, or the tricks of an ad writer.—W. S. Kyes, in Bulletin of San Diego County Medical Society.

ANOTHER COMMITTEE ON THE NURSING PROBLEM REPORTS

The committee appointed and financed by the Rockefeller Foundation for the study of Nursing Education has made its report. The committee recommends:

The trained registered nurse for the care of the acutely ill, the present training course of three years to be enriched and improved and at the same time reduced to 20 per cent in length, without lowering standards;

The public health nurse, the supervising nurse, and the teacher in schools of nursing, who are to receive specialized postgraduate training in addition to the standard course for registered nurses;

The subsidiary nursing worker, to be trained by an eighteen months' course and licensed as nursing aide or nursing attendant for the care of minor and chronic illness and convalescence;

The Committee emphasizes the supreme value of combining bedside and instructive public health nursing and urges that the nurse who renders direct professional service in lessening the burden of illness has an overwhelming advantage then and thereafter in teaching the lessons of hygiene;

As to her training, it is the judgment of the Committee that the public health nurse, as a teacher of hygiene in the home, should be equipped with no less thorough training than that accorded to the bedside nurse, further supplemented by special studies along lines of public health and social service.

The most valuable feature of the report is the committee's condemnation by faint praise of the cheap circus buffoonery of one sort or another that is being exploited in many places by regularly organized propaganda methods to replace education and practice in a field requiring education and training:

The new educational objectives of the health administrator may be approached to a limited extent by mass methods. The printed page, the public lecture, the exhibit, the cinematograph, the radiogram, help to prepare the ground and make success easier. The ultimate victory over ignorance is, however, rarely attained in such ways. Direct personal contact with the conditions of the individual life is essential to success in a matter so truly personal as hygiene. . .

The majority of trained nurses are concentrated in the larger cities so that the rural districts in many states are wholly lacking in service of this kind. The evidence is that at present, in the cities, the supply of trained nurses is adequate for existing demands in normal times. The reason that so many persons who need nursing care in hospitals and in the homes of the poor fail to receive it, is to be sought in economic factors, rather than in a shortage of nurses.

On the question of nursing education requirements, the committee takes a positive stand in these words:

That for the care of persons suffering from serious and acute diseases the safety of the patient, and the responsibility of the medical and nursing professions, demand the maintenance of the standards of educational attainment now generally accepted by the best sentiment of both professions and embodied in the legislation of the more progressive states; and that any attempt to lower these standards would be fraught with real danger to the public.

The committee endorses the subsidiary, substandard or apprentice nurse:

That steps should be taken through state legislation for the definition and licensure of a subsidiary grade of nursing service, the subsidiary type of worker to serve under practicing physicians in the care of mild and chronic illness, and convalescence, and possibly to assist under the direction of the trained nurse in certain phases of hospital and visiting nursing.

The report states that their survey of the situation:

Does not indicate that the income of the private duty nurse is at present generally an exorbitant one, when we take into account the degree of unemployment—amounting in a typical group of 118 nurses to a week each month during the busy winter season. The solution of the economic problem which confronts the family of low income probably must be sought along the lines of cost distribution through some form of community organization, or along the lines of group insurance.

The report condemns the "apprentice" method of training by which most nurses have been educated. Their conclusions are based upon a study of:

twenty-three carefully selected schools, representing the main types of hospitals in various sections of the country and the best current practice in nursing education, were studied in detail. Defects were found in both the practical ward training and in the class room teaching. Inadequate laboratory equipment, excessive night work, inadequate supervision of student nurses, and lack of an intelligently planned progressive course of study are among the points mentioned for criticism. Most striking of all, however, according to the Committee's report, was the factor of time wasted in procedures essential to the conduct of the hospital, but of no educational value to the student concerned. Hours and days spent on the work of a ward maid, in putting away linen, in sterilizing apparatus, in mending rubber gloves, in running errands, long after any important technique involved had become second nature, accounted in one typical hospital where this problem was especially studied for a clear wastage of between one-fourth and one-fifth of the student's working day.

The remedy proposed by the committee is as follows:

It is fundamental to the success of nursing education that adequate funds should be available for the educational expenses of the school itself, and for the replacement of student nurses by graduate nurses and hospital help in the execution of routine duties of a non-educational character. With the necessary financial support, and under a separate board or training school committee, organized primarily for educational purposes, it is possible, with completion of a high school course or its equivalent as a prerequisite, to reduce the fundamental period of hospital training to twenty-eight months and at the same time, by eliminating unessential, non-educational routine, to organize the course along intensive and co-ordinated lines with such modifications as may be necessary for practical application; courses of this standard would be reasonably certain to attract students of high quality in increasing numbers. . .

The working day of the student should also be reduced to eight hours. More than eight hours on the average is now required in ward duty alone, exclusive of all class room instruction.

For the education of subsidiary nurses the report recommends:

That when the licensure of a subsidiary grade of nursing service is provided for, the establishment of training courses in preparation for such service is highly desirable; that such courses should be conducted in special hospitals, in small unaffiliated general hospitals where nurses are also trained; and that the course should be of eight or nine months duration, provided the standards of such schools be approved by the same educational board which governs nursing training schools.

Experienced persons always have realized that the real problem of nursing education was financial. The recommendations of the committee would increase the cost of educating nurses enormously. They realize this and recommend:

That the development and strengthening of university schools of nursing of high grade for the training of leaders is of fundamental importance in the furtherance of nursing education.

The training of nursing aides will cost money; the training of nurses will cost more money; the university school will require endowment. The hospital, in its operation of the training school, has for generations been trying to make bricks without straw. It is time that the hospital should be relieved from the dilemma of exploiting student nurses on the one hand, or of diverting funds given for the care of the sick on the other, by the provision of endowment specifically devoted to the purpose of education.

To Combat the "Ism"-ites—A Boston dispatch of August 19 reports the incorporation of a society, largely made up of members of the Massachusetts Bar, "to oppose further Federal encroachment upon the reserved rights of the States." Another announced purpose is "to stop the growth of socialism." This is cheering. The good Lord knows that the country needs some sort of organized effort to counteract the innumerable movements tending more and more in the direction of bureaucracy. The present year has witnessed a dangerous growth in number and variety of movements tending to radicalism, socialism, and the several other "isms," particularly at the Nation's capital.—Argonaut.

Counties Appropriate Funds for Full-time Health Departments—"Monterey, San Luis Obispo, and Riverside Counties have each appropriated $5000 for the establishment of full-time health departments in their respective counties. San Joaquin County has about completed plans for the establishment of such a department."—Weekly Bulletin, California State Board of Health.

"OBESITY CURES"

Never before in the history of advertising has there been so much money expended in advertising so-called "Obesity Cures." They are of every class and description. It is particularly fortunate that the Propaganda Department of the American Medical Association has seen fit to issue a new pamphlet on this subject. Every physician ought to have this pamphlet and read it. In the introduction, we read: "Women's fashions during the past few years gave a wonderful stimulus to one branch of quackery—the exploiters of 'obesity cures.' The desire to be slender — and slender to a degree often far beyond that compatible with good health—caused thousands of women to throw away money on so-called reduction treatments that were either dangerous or worthless, and sometimes both. Thyroid extract was the basis of many of the 'fat reducers' first put on the market, and this drug is still used in some of them. The public, however, has been warned of the dangers of this powerful agent, so that it is becoming increasingly difficult for those who live on the fat of the land to sell remedies of this type. . . .

"Practically every 'fat cure,' no matter to what type it belongs, is exploited under two specific claims: First, that those who use it do not need to diet; second, that they need not exercise. It is hardly too broad a statement to say that every 'obesity cure' is also sold under the claim that it is different from every other 'obestity cure.' The most wildly extravagant representations are made by the dispensers of these worthless cures. Especially is this the case in those that are sold on the mail-order plan rather than directly through the drug stores. It is after the purchaser has parted with her money that she finds how widely the 'treatment' she has purchased differs from what she had been led to believe it was. The preparations discussed in this pamphlet are but a few of the hundreds on the market. They are, however, typical."

The pamphlet, of course, is limited to the most widely advertised of these alleged cures, and the list includes interesting information regarding alleged cures that are advertised extensively, including California. The "cures" exposed are: "Absorbit Reducing Paste," "Allan's Anti-Fat," "Antipon," "Arbolone Tablets," "Auto-Masseur," "Z. T. Baker," "C. H. Barbour," "Basy Bread," "Berledets," "Biel (Hattie) & Co.," "C. E. Biel," "M. S. Borden Co.," "Botanic Medicine Co.," "H. C. Bradford," "F. T. Brough," "Burns Belt Co.," "G. F. Cain," "Clark's Thinning Salts," "Corpulin," "W. C. Cunningham," "Dalloff's Tea 'Contre l'Obesite,'" "Doctors' Essential Foods Co.," "Jean Downs," "Elimiton (Hurwitt)," "Every Woman's Flesh Reducer," "Fatoff," "Fell Reducing Treatment," "Figuroids," "Get Slim," "Graziana Reducing Treatment (Zehrkur)," "Texas Guinan, Inc.," "Marjorie Hamilton," "Hargreave's Reducing Wafers," "Hughes & Hughes XL Reducing Pills," "G. J. Hurwitt," "Interstate Drug Co.," "J. Z. Obesity Tablets," "F. J. Kellogg," Kellogg's Safe Fat Reducer," "Lucile Kimball," "J. A. Knox," "Oil of Korein," "W. Lawlor," "Louisenbad Reduction Salt," "Marmola," "Modern Vacuum Cap Co.," 'Morlene," "Nelson Lloyd Treatment," "Newman Obesity Cure," "Nikola," "Normal Pills," "Onadal," "Parnotis," "A. J., J. N. and N. Petrucci," "Phatolene Tablets," "Phy-thy-rin," "Phytoline," "Protone Co.," "Rengo Co.," "Russell's Anti-Corpulent Preparation," "Sanitone Wafers," "Sel Amaigrissant Clark," "Seymour Treatment," "Society of Associated Physicians," "R. T. Stradus," "Sylphine," "Trilene Tablets," "(F.) Turner Triplex System," "Verlie Gatlin Co.," "Vincent's Anti-Stout Pills," "Walker Pharmacal Co.," "A. Gordon Wallace's, Treatment," "M. Wood," "Pale's Fertilizer Tablets," "Zobeide."

All of these propositions are analyzed and commented upon freely in the pamphlet referred to. For example, one of these products most extensively advertised in California is "Marmola." This product has been analyzed and was shown to contain essentially the following:

Dried thyroid gland	1.4 gr.
Phenolphthalein	0.4 gr.
Sodium chlorid	0.7 gr.
Powdered Fucus vesiculosus (bladderwrack)	5.0 gr.
Extractive	2.5 gr.
Oil of peppermint	trace

Any product which depends for its essential action on the presence of thyroid extract is much too dangerous for indiscriminate use. Physicians have, at various times, reported cases of patients with severe or obscure nervous symptoms that investigation showed were due to the taking of some "patent medicine" containing thyroid extract.

Validity of License Tax on Physicians—We are frequently asked as to the legality of county, municipal and other local taxes on physicians. The following case of the city of Redding v. Dozier (California), 206 Pac. R., 465, will answer the question permanently:

"The District Court of Appeal of California, Third District, in affirming a judgment in favor of the plaintiff city for $10, which was alleged to be due as a license tax imposed under an ordinance adopted by the city, says that the defendant was a physician and surgeon residing and practicing in the city and having his office at his place of residence. The city is one of the sixth class. The ordinance was entitled 'An ordinance to license various classes of business, shows, exhibitions and games within the city of Redding for the purpose of revenue and regulation, and fixing the rates of license tax upon the same and providing for the collection of the same by suit or otherwise.' Section 1 provided that every person, firm, etc., who had a fixed place of business, and engaged in, carried on, or conducted any business, exhibitions or games described in this ordinance, within the city, should pay a license therefor in the amount thereinafter specified. Section 2 provided that the licenses to be paid, the persons who should be required to pay the same and the business on which the same were to be paid were, besides others, '(29) lawyers, doctors and dentists, $5 per quarter.' The principal question raised was whether the city had authority to impose the tax. The court thinks that it had, under the statutes of the State. In Ex parte Johnson (Calif. App.), 190 Pac. 852, it was held that a city may impose a license tax for carrying on the business of a lawyer at a fixed place of business. In Ex parte Falusha, 194 Calif. 697, 195 Pac. 406, the Supreme Court of California reached the same conclusion. It must be held that the same rule applies to a physician and surgeon.

"The complaint in the present case alleged that the 'defendant was and now is a doctor practicing medicine and having his office and principal place of business in the city of Redding.' The defendant argued that the allegation as to place of business was not the equivalent of a 'fixed place of business.' The court deems the criticism hypercritical. The defendant testified that he had a large practice; that he received patients at his residence and performed operations there; that he regularly kept patients at his residence for treatment when they required close observation; that there was no room in his residence designated as an office, but that he treated his patients in the living room; and that he treated most of his patients at their homes. The foregoing evidence, coming from the defendant, the court thinks showed conclusively that he had a fixed place of business and that the alleged defect in the complaint, if conceded to be a defect, could not have prejudiced his rights.

"Hearing was denied by the Supreme Court of California."

QUACKERY, MIRACLE HEALING AND MEDICAL CULTS

(By Robert W. Lovett, Boston Medical and Surgical Journal.)

If one goes backward in the history of civilization, one finds wherever and whenever one looks into it, three persistent parasites clinging to each successive stage of civilization. These are drunkenness, prostitution, and quackery. The State legislates against them; the Church fulminates against them; the better part of the community from time to time rises and decides to exterminate them; but in the Vedas of India, the classics of Greece and Rome, the early records of Egypt and Arabia, and the writings of the Middle Ages, you will find that parasite with which we are for the moment concerned—quackery—described, deplored, and condemned in terms almost of today.

To maintain such vigor, such persistence and such superiority over all the efforts of Church, State, and Society to overcome it, quackery must have deep roots in human nature, and it is of interest to inquire what these roots are.

Causes of Quackery—The first of these lies in human gullibility. It has never been better expressed than by Butler in the following lines from Hudibras:

> The world is generally averse
> To all the truths it sees and hears;
> But swallows nonsense, and a lie,
> With greediness and gluttony.

The part of the people that can be fooled all the time includes several groups, each of which is fertile soil for the quack: (1) the very ignorant; (2) a peculiar class which seeks the mystical, the occult, and the irregular; (3) an unreasonable class, which espouses an unpopular cause, simply because it is unpopular, without any investigation of its merits, and which finds in the occult mysticism of India a satisfaction which does not come from the contemplation of facts as they are. One might describe them as a submerged class—submerged in the matter of reason and common sense.

The proportion of the gullible class in any community varies, but the estimate of a celebrated quack may be of interest. He was visited by a former play-fellow from his native village, who asked how he had got on so well, adding with the frankness of early friendship, "Thee knowst thee never had no more brains than a pumpkin." The quack took him to the window and bade him count the passersby. When a hundred had passed, the quack asked his visitor: "How many wise men do you suppose were amongst this hundred?" "Mayhap one," was the reply. "Well," returned the quack, "all the rest are mine."

In the history of the past there is no more amusing group of rogues than the famous quacks of the ages. Facile, specious, without conscience, and with unlimited daring, they come down through the years, not depressed by adversity, and always ready to trade on human gullibility."

Types of Quackery—Taking quackery and irregular practice from the time of Hippocrates (460 B. C.), the Vedas of India (600 B. C.), or the time of Galen, the stream flows down through the centuries in five main channels, and in analyzing these it will be interesting to see how little is new in modern cults. These channels are as follows:

1. Nostrums and Proprietary Medicines.
2. Miracle Healing.
3. Mental Healing.
4. Methods of Manipulation.
5. The Amateur Quack.

(1) **Nostrums and Proprietary Medicine**—These are sold in part with criminal intent and in part, probably, by stupid people, who believe in the efficacy of their concoctions. There is, however, no question of the intentions of the man who sold a morphine cure, containing morphia, or an inert cancer cure, or a disguised cocktail to innocent persons who were appreciative of the subsequent comfortable feeling, now described as "the kick," but ignorant whence it came. The antiquity of this branch of quackery is doubted. So long as medicine consisted of charms, amulets, and incantations, not much could be done in the way of faking imitations; but when remedies became established, so did nostrums.

(2) **Miracle Healing** — The subject of miracle healing is of established antiquity, but whether one view it from the point of view of the past or of today, it is too closely allied with religion to be discussed without the danger of giving offense. It is to be divided into three main divisions: (a) miracles in response to prayer; (b) miracles claimed by Christian Science, such as the cure of cancer; and (3) miracles by the laying on of hands, with or without prayer. The first-named is perhaps best seen in the miracle churches of Lourdes and St. Anne de Beaupre.

(3) **Mental Healing**—In this matter, also, too free discussion is likely to bring one into contact with religious belief, and the subject can be dealt with only superficially. It may be divided into three main groups: Christian Science; The Emmanuel Movement; and Mesmerism. A cure by mental healing implies an action of mind on body, not necessarily a direct miracle with the reversal of Nature's laws, but a healing by the natural mechanism of the body. This is best exemplified in Christian Science, which also figured in the last section; and those interested will find ample literature at their disposal. The Emmanuel Movement was based on the assumption that medical men did not sufficiently use the spiritual and mental aspect of therapeutics in their treatment of the sick, and that this could be supplied from the outside, preferably by the Church. . . . There is plenty of literature concerning it for those interested. One quotation may be given. "Chronic ailments of every sort yield as if by magic to the benign influence of suggestion—headache, toothache, neuralgia, rheumatism, insomnia, epilepsy, hysteria, neurasthenia, alcoholism, morphine, tobacco, stammering, sciatica, St. Vitus' dance, nervous dyspepsia, constipation, goitre, tumors, paralysis, etc."

(4) **Methods of Manipulation** — Bone-setting, osteopathy, and chiropractic. All other forms of irregular healing have at the present time largely given place to those by methods of manipulation. Of the three manipulative sisters, bone-setting, osteopathy, and chiropractic,

Bone-setting — Reference to manipulative treatment akin to bone-setting is found as early as the days of Homer, and it is probable that its origin is even earlier than this, although actual record of it seems to be lacking. Among the other camp followers of medicine were the gymnasts or Iatraleiptes, who, besides exercises, practiced inunction of the body. They were also, it would appear, bone-setters, and were naturally led to give first aid in all accidents and in many diseases, and to advise as to diet and regimen.

Osteopathy on analysis seems to be bone-setting, not much modified, but to which has been added a fantastic and unproved pathology to account for the claimed efficiency of its methods. An interesting quotation may be taken from one of the standard osteopathic text-books: "There is no doubt in my mind as to the similarity existing between the conditions which were recognized by so-called 'bone-setters' and those which have formed the basis for the successful advance of osteopathy. The difference lies principally in the educational qualifications." After reading the osteopathic theory of disease one comes almost to admire old Mr. Hutton, who openly announced that he neither knew nor cared to know anything about anatomy.

It is, therefore, interesting to examine the tangible evidence as to this (osteopathic pathology)

which has so far been offered. Three varieties of proof are available:

1. In the dissecting room and at autopsy: The claim is made that dissections of bodies reveal anatomical lesions associated with disease of organs; these observations have been made at osteopathic colleges, but such changes have not been observed in the dissecting rooms of the medical schools of the world. The claim that these "lesions" are found is, therefore, apparently not substantiated by sufficient evidence, which is eagerly awaited.

2. The X-ray: It is claimed that the X-ray has frequently shown an osteopathic lesion, which disappeared after reduction. The experience of the medical profession is otherwise. It has only to be remembered how slight a distortion in the line of the shadow will produce the appearance of a displacement in an X-ray, and that the reading of an X-ray differs greatly. I can only state that in my personal experience in one or two instances I have been privileged to have taken in my own X-ray room, under fixed conditions, radiographs before and after the so-called "reduction" of a lesion by others. The closest analysis of the radiographs before and after failed to show the slightest change in the position.

3. Animal Experimentation: Bulletin V, of the A. T. Still Research Institute of Chicago, Ill., published in 1917, is a contribution to the study of the effects of experimental lumbar "lesions." "Lesions" were produced by forcible subluxation in which it is amusing to note that great care was taken to prevent any injury to the articular tissues. "Lesions" were also produced by gentle taps near the spinous processes of the selected vertebrae. These animals were then studied. So far as one can judge from the decidedly imperfect X-rays reproduced as evidence, a partial fracture of the spine was not uncommon. Various organs were then studied with regard to the effect of these lesions, but the work seems loose and very discursive, and is far from convincing. In this experimental work two especially long steps are taken by making assumptions which will demand better proof before animal experimentation can be of value. These assumptions are: (1) The frequency of osteopathic lesions of a demonstrable character existing in human beings; (2) that such lesions can be duplicated in quadrupeds by wrenching, tapping and manipulating their spines.

Chiropractic—When we come to the third and youngest, and least reputable of the three manipulative sisters, Chiropractic, we take a definite step downward. The Journal of Osteopathy speaks of chiropractors as "fakers," but the Supreme Court of Montana handed down a decision that "chiropractic is nothing more nor less than osteopathy under another name." The basis of the so-called "science" is the so-called "chiropractic subluxation" of a vertebra. This means a slight or partial separation between the articulations so that they are not exactly together. When a subluxation occurs there begins a pressure on the nerve coming through the intervertebral foramina and this shuts off the flow of life force going through that nerve and acts as a rheostat or booster to the current going through it. Chiropractically speaking, disease is simply a register as to the amount or excess of current that an organ receives at the end of the nerve: Slight pressure "steps up" the current; heavy pressure paralyzes. One would, therefore, adjust for cancer or gonorrhoea. This theory of disease is too fantastic, crude and unsupported to warrant discussion, but it spells danger to the community, and to what lengths it will go can only be appreciated by reading the testimony of B. J. Palmer in the Wisconsin courts. Chiropractors claim that they are licensed to practice in twenty-two States. The Universal Chiropractors' Association guarantees the graduate "the legal right to practice; or we will, through process of the law, know the reason why. . . . The fact that chiropractors are practicing in every State of the Union, and that the U. C. A. has not failed to protect them speaks for itself." In Massachusetts they have no standing whatever. The escape for the chiropractic in this State is to register as a masseur, but to pose as a chiropractor. If he is caught, he has only to claim that he is practicing massage. It seems not unlikely that a definite attempt will be made in this State to establish a licensing board for chiropractic.

(5) **The Amateur Quack**—The last and fifth division of the irregular practitioner has not been, up to this time, sufficiently appreciated. The amateur quacks outnumber all the others put together. They are active in every community. They are actuated by altruistic motives and they do only a moderate amount of harm. The prevalence of these amateurs in medical matters is not new.

If any one of you will do your knee up in a ham splint and bandage, and take a pair of crutches and go three or four miles in the trolley cars, you will find out two things: The desire of everybody to be considerate and to make room for the invalid to sit down, and the curiosity, unconcealed, but outspoken, of many of your fellow-passengers as to the cause, history, and progress of the ailment. People who have never heard of Mr. Howells' well-known man, in Chicago, who made his fortune by minding his own business, are eager to offer advice. You may give them whatever diagnosis you like, varying from a sprained knee to sarcome, or fractured patella, and you will find that they have either had it themselves, or had a relative or friend who had it, and the treatment by which he was cured was something entirely different from yours, unless the result was fatal, in which case you will be informed of that. The number of remedies proposed is legion, and it is surprising to find that more people are not unsettled by this sort of thing.

Percentage of Hospitals Admitting Osteopaths—Question 1 of the Round-Table Session of the American Hospital Association's annual meeting was, "What percentage of the hospitals in the association allow osteopaths to care for patients in the hospital; and under what conditions, if any, are they allowed?"

The answer, given by Dr. W. P. Morrill, Shreveport (Ala.) Hospital: "By the questionnaire method the following figures were obtained in relation to the percentage of hospitals which allow osteopaths to care for their patients: 83 1/3 per cent do not admit them; 11 1/3 per cent admit them under the supervision of M. D.'s; 3 per cent permit them to practice independently." Some extremely amusing and illuminating comments accompanying the questionnaire replies were read by Dr. Morrill. One institution admits osteopaths if the patient will sign a paper assuming full responsibility; another admits but "does not encourage" them; one writes, "They shall not pass."—The Modern Hospital.

Women's Foundation for Health, Inc.—A large, enthusiastic, and apparently earnest body of women and women's organizations of the United States have been brought together under the above title. According to the literature: "The Women's Foundation of Health, Inc., is a co-operative body of leading women's organizations formed with the purpose of correlating the health activities of the various organizations in a program emphasizing the positive phase of health." The objectives as published are: "To establish the conviction that health is generally attainable through individual effort and responsibility," and "To establish the conviction that mental health is as procurable as physical health." The present board of nine trustees contains the names of two physicians—Dr. Anna L. Brown and Dr. Martha Tracy. Headquarters of the foundation are at 43 East Twenty-second Street, New York City.

STATE SOCIETY

MEMBERSHIP OF THE STATE MEDICAL SOCIETY

The following tabulation shows by Counties the actual membership in the State Medical Society and in the Indemnity Defense Fund for the years 1921 and 1922:

	1921		1922	
County	Members	I. D. F.	Members	I. D. F.
Alameda	291	112	309	128
Alpine	19	9	17	9
Contra Costa	40	12	39	14
Fresno	114	49	119	55
Glenn	13	2	13	3
Humboldt	23	13	22	14
Imperial	21	0	21	0
Kern	39	13	39	14
Lassen-Plumas	6	1	9	2
Los Angeles	1098	242	1186	319
Marin	16	5	13	5
Mendocino	20	10	17	12
Merced	19	5	15	9
Monterey	23	- 15	21	16
Napa	15	6	18	9
Orange	57	22	64	24
Placer	25	10	27	9
Riverside	45	19	47	20
Sacramento	92	47	90	56
San Benito	1	1	6	1
San Bernardino	69	30	73	34
San Diego	150	36	162	35
San Francisco	735	289	766	308
San Joaquin	75	25	74	28
San Luis Obispo	21	10	18	13
San Mateo	14	8	12	7
Santa Barbara	54	17	56	22
Santa Clara	104	55	109	54
Santa Cruz	26	14	29	15
Shasta	16	9	15	10
Siskiyou	16	9	15	11
Solano	15	6	17	7
Sonoma	42	12	36	14
Stanislaus	38	16	36	18
Tehama	8	2	11	2
Tulare	35	15	36	19
Tuolumne	6	4	6	4
Ventura	14	1	12	1
Yolo	21	8	19	9
Yuba-Sutter	9	3	11	3
	3405	1150	3605	1333

There are about 3000 educated physicians licensed to practice in this State who are not, but should be members of the State Medical Society.

THE 1923 MEETING OF THE AMERICAN MEDICAL ASSOCIATION, SAN FRANCISCO, TUESDAY TO FRIDAY, JUNE 25 to 29

The California Medical Association, with all of its constituent members; the League for the Conservation of Public Health; and the San Francisco Convention and Tourist League, with all of its affiliated organizations, are combining to make the 1923 Meeting of the American Medical Association a memorable one.

Permanent headquarters for all of the committees and for all matters pertaining to the 1923 meeting have been established at 806 Balboa Building, San Francisco. Any person or organization desiring any information on any point within the jurisdiction of the local committee of arrangements, or any assistance or other service connected with the annual meeting, are requested to address their communications to these offices. It will not be nesessary to remember the name of any committee or committee officer, because all mail, both incoming and outgoing, connected in any way with the California end of this work, will be distributed through our headquarters offices.

In addition to all matters medical, inquiries regarding transportation, sightseeing, California resorts, hotels, shopping, or any other matters of business or pleasure, will be promptly referred from these central offices to people competent to handle the situation.

Through the co-operation of the San Francisco Convention and Tourist League; the San Francisco Chamber of Commerce; the Northern Californians, Inc., and other social, commercial and industrial organizations, it is hoped that every service and every convenience possible will be made available to every person coming to California under the auspices of the American Medical Association. San Francisco already is a great national convention city. One hundred and fifty-eight national conventions will have convened in that city during 1922 and a larger number are scheduled for 1923.

There are ample splendid hotel facilities for all who wish to come. Details of the scheduled prices of 30 or 40 of these hotels will be furnished shortly by our committee on hotels, working with the Northern California Hotel Men's Association. Reservations may be made at any time by addressing the headquarters offices, San Francisco, or the hotel of your choice.

Reservations have been made at the Palace Hotel for the trustees and other officers and delegates of the American Medical Association.

All of the work of the convention will be held in one building, the Civic Auditorium, which has more rooms of ample size than will be needed, with plenty of committee rooms and offices for all officers and sections, in addition to ample space for both scientific and commercial exhibits. This building is within the zone of the great business, shopping and hotel center of the city.

Committee of Arrangements

(An ex-officio committee representing the various medical organizations of California)

Executive committee: W. E. Musgrave, chairman; Ina M. Richter, secretary; John Gallwey, treasurer.

Ray Lyman Wilbur, President-Elect American Medical Association; Henry G. Brainerd, President State Medical Society; T. C. Edwards, President-Elect State Medical Society; W. W. Cross, Second Vice-President State Medical Society; William Ophuls, Dean of Stanford Medical School; L. S. Schmitt, Acting Dean University of California Medical School; Percy T. Magan, Dean of College of Medical Evangelists; George E. Ebright, President State Board of Health; Dudley Smith, President League for the Conservation of Public Health; Robert Pollock, President Southern California Medical Association; J. R. Snyder, President Northern California Medical Association; Saxton T. Pope, President San Francisco County Medical Society; Donald J. Frick, President Los Angeles County Medical Society; E. E. Brinckerhoff, President Alameda County Medical Society; W. W. Crawford, President San Diego County Medical Society; G. P. Dillon, President Sacramento County Medical Society; L. R. Johnson, President San Joaquin County Medical Society; Raymond Wayland, President Santa Clara County Medical Society; G. W. Walker, President Fresno County Medical Society; James H. Parkinson, representing all other Northern County Society Presidents; George H. Kress, representing all other Southern County Society Presidents; Howard H. Johnson, Associate Secretary of the California Medical Association; the chairmen of all subcommittees, as follows:

Dr. A. W. Hewlett, chairman subcommittee on

sections and section work; Mariana Bertola, chairman subcommittee on registration; Rene Bine, chairman subcommittee on commercial exhibits; Frank Hinman, chairman subcommittee on scientific exhibit; Harry E. Alderson, chairman subcommittee on entertainments; Morton R. Gibbons, chairman subcommittee on hotels; Alfred C. Reed, chairman subcommittee on printing; R. Knight Smith, chairman subcommittee on finance; John H. Graves, chairman subcommittee on publicity.

Names of chairmen of sub-subcommittees and other members of committees will be published next month.

Fears Excess in Standardization—Dr. George D. Stewart, president of the New York Academy of Medicine, in an entertaining address opened the general session (American Hospital Association) on Tuesday evening. His subject was "Standardization Values" and he sounded early warning that he did not set too high an estimate on that practice, which has lately become the cry of the hour.

"Nowadays," began Dr. Stewart, "we standardize everything from shipbuilding and hospital administration to birth control and control of appetites. Standardization is largely begotten of our economic necessities and sometimes it leaves out all other considerations. It is a recognition of the fact that we have exploited our natural resources and if carried to excess hinders progress.

"The standardization of medicine and of hospital management may result in much good or in great danger. The easiest way to settle down into a rut is to standardize. I have even heard of one hospital superintendent who issued typewritten directions for its staff members to follow in performing an operation. I deplore the attempt to make me do a thing a given way, if I can do it a better way.

"Standardized histories in the hospital can constitute a source of great error, if made by one man and filled in by another. In my opinion, the histories should be made by the man himself and interpreted by him. Collectivism and standardization lead toward communism, and in communism individuality is relinquished entirely."—The Modern Hospital, October, 1922.

A County Contract With the County Medical Society—"The Board of Supervisors and the Cherokee County Medical Society, according to a statement in the Herald, a paper published at Stuart, Iowa, have entered into a contract whereby the medical society agrees to attend to all medical and surgical needs of the poor in the county until January, 1923. The county is to pay the medical society the sum of $3500, which, at the termination of the contract, is to be distributed among the members of the society in proportion to the amount of work done by each. Under this arrangement a dependent person is to have the privilege of selecting his attending physician from among the membership of the society, which, we are told by the Herald, includes practically all the doctors in Cherokee County.

"This is a somewhat novel contract and it will be interesting to see how the arrangement made will work out. In most counties the governing authorities enter into a contract with one physician, some with a stated compensation, some on a fee basis, who serves all indigents receiving medical and surgical care at the expense of the county. The Cherokee County plan will remove the occasion for a complaint, frequently made by indigents, to the effect that the service rendered by the "county doctor" is not satisfactory, because under this plan the dependent person will choose his own medical attendant."—Bulletin A. M. A., Oct. 1922.

COUNTY NEWS

CONTRA COSTA COUNTY

Contra Costa County Medical Society (reported by L. St. John Hely, secretary)—The society met in regular monthly session at the home of C. R. Leech at Walnut Creek, October 28, 1922, with the following members present: Clara and J. B. Spalding, Auslen, Gregory, Neff, Beard, Cunningham, Carpenter, Marks, Kelly, Smith, Leech and Hely. Mrs. Auslen and Mrs. Leech were guests. Ethan H. Smith of San Francisco read a paper on fractures, discussing the subject from all angles and presenting methods of treating broken bones of different parts of the body. Kelly of the State Hygienic Laboratory of the University of California demonstrated and gave an interesting talk on the Schick test. The epidemic of diphtheria at Pinole was completely stamped out by this method. This was also done at Tracy, where there was another epidemic.

After the meeting, a luncheon was served by Mrs. Leech. The annual meeting in November will be held at the Hotel Oakland at dinner, followed by a theatre party at the Orpheum.

FRESNO COUNTY

Fresno County Medical Society (reported by Thos. F. Madden, secretary)—The Society met November 7, at the Commercial Club, Fresno, with the following members present: Aller, Breemser, Brown, Collins, Couey, Cross, Divanovich, Goldberg, Jamgotchian, Jorgenson, Kjaerbye, Long, Madden, Manson, Montgomery, Milholland, Schiro, Schottstaedt, Sciaroni, Sheldon, Stein, Tillman, Trowbridge, J. R. Walker, G. W. Walker, Weise, Willson, Dearborn and O'Neill.

Applications for membership were received from E. R. Scarboro and A. A. Calaway.

F. W. Lynch of San Francisco presented a paper entitled "Certain Fundamental Features Concerning Retroversion of the Uterus." This paper was discussed by C. D. Collins. C. P. H. Kjaerbye presented a paper entitled "Psychoneurosis, Its Relation to the General Practitioner."

Arrangements have been made for members of this society to meet with members of the Merritt Hospital staff in Oakland on the evening of December 2nd. A scientific program will be prescnted, also entertainment. Chester Rowell will give a short address.

LOS ANGELES COUNTY

County Hospital—Norman R. Martin, Superintendent of Charities of Los Angeles County, in making a merited appeal for a bond issue, gives some interesting statistics about the work of the Department of Charities, including the County Hospital:

"The average daily patient population for the fiscal year ending June 30, 1921, was 1038; for the year ending June 30, 1922, similar average was 1133, or a total daily increase of 94 patients. The daily average of employees during the last fiscal year was 688; and the average number of patients to each employee, 1.65.

"There are 45,000 persons handled yearly through the Hospital receiving room, but only 15,000 of these are admitted as bed patients. A large proportion of the remaining 30,000 could be treated with a fair degree of satisfaction through an outpatient department. This figure emphasizes the importance of establishing at once such a department of competent organization and capacity."

Olive View Sanitarium—This sanitarium for patients suffering from tuberculosis is owned and

operated by the city and county of Los Angeles. It is often improperly termed the Sylmar Sanatorium. This institution is located in the foothills, twenty-five miles from Los Angeles by paved highway, and four miles north of San Fernando at an elevation of 1500 feet and overlooking the beautiful San Fernando Valley. It comprises 454 acres of land, ideally situated, and was opened on October 27, 1920. Patients are admitted through the Los Angeles County Hospital. Present construction consists of one Infirmary Building, 357 feet long, including 26 private rooms and suitable accommodations for administrative offices as well as facilities for surgery, X-ray and dentistry, pan rooms, blanket warmers, linen rooms, diet kitchens, etc.; ward buildings with community sitting room, twelve ward beds on either end, with two private rooms and nurses' chart room, as well as ample lockers, bath and toilet facilities; Service Building containing main kitchen, bakery, dining rooms for male and female patients and for different types of employees, refrigerators and storeroom; two two-story cottages for employees, modern and up to date in every particular; and one Superintendent's cottage. Water supply—Los Angeles aqueduct crosses the property and a buster pump forces water to a 300,000 gallon reservoir 175 feet above the property. There is also a reserve water supply from a well. Sewer system—Septic tank. Construction is now being commenced for eight additional ward buildings, three for ambulant cases and five for hospital type cases. When completed, the two present ward buildings will probably be used for the hospital type cases. Within a short time construction will be commenced of two additional two-story employee cottages; a complete power plant; laundry; and utility building, housing linen room, mechanics' shops, pump house, etc. The completion of these new improvements within the next nine months will give this institution a capacity of 300 beds. At that time it is expected to still further increase the capacity by 200 additional beds, making a 500 bed institution. It is the expectation to transfer, as soon as possible, all of the tuberculosis patients from the County Hospital to Olive View Sanatorium with the idea of retaining only at the County Hospital "clearing house wards," male and female, admitting all patients to Olive View through the Hospital. This will be more convenient for patients and will retain to the medical profession the observation and preliminary treatment of such cases at a convenient point. Transportation between the Sanatorium and San Fernando and Los Angeles is covered by one truck, one Cadillac bus, one 7-passenger Hudson touring car and one Ford. The Sanatorium is a portion of the Department of Charities, and is operated as a ward of the County Hospital division.

MADERA COUNTY

Bond Issue for Madera County Hospital Defeated—Madera County voters defeated a proposed $150,000 bond issue in the election Tuesday, November 7.

MONTEREY COUNTY

Salinas Valley Hospital Open—The Old Red Cross health center of Salinas has been purchased by a co-operation and converted into an eight-bed hospital. This hospital is now in operation and open to all doctors of medicine of the community.

ORANGE COUNTY

Full-Time Health Department for Orange County—"The supervisors of Orange County last week appropriated ten thousand dollars for the establishment of a full-time health department in that county. Dr. A. H. Domann, county health officer, was largely instrumental in bringing about this result. His enthusiasm, vision and public-spirited attitude mean much for the future of public health in Orange County. The various municipalities of the county will, undoubtedly, co-operate and join the full-time department. It is planned to establish a bacteriological laboratory in co-operation with the county hospital.

"Monterey and San Luis Obispo counties have already appropriated money for the establishment of full-time county health departments, and it is believed that at least two other counties will soon perfect plans for the establishment of similar organizations." (Weekly Bulletin, California State Board of Health, October 21, 1922).

RIVERSIDE COUNTY

Mary Henderson Sanatorium—The Seymour Sanitorium at Banning has been sold to Miss Mary Henderson and the name has been changed to the Mary Henderson Sanatorium, with two classes of service—one for general hospital patients and the other for convalescents.

SAN BERNARDINO COUNTY

San Bernardino County Medical Society (reported by E. J. Eytinge, secretary)—The society met November 3 at the San Bernardino County Hospital, with 25 members present and 50 absent. There were also 25 guests. The address of the evening was given by H. A. Johnston of the Johnston-Wickett Clinic, Anaheim, on "Group Practice." C. G. Hilliard opened the discussion, which was general. The following officers were elected for the ensuing year: F. H. Folkins, president; G. S. Landon, first vice-president; E. L. Tisinger, second vice-president; E. J. Eytinge, secretary-treasurer. E. J. Eytinge was also elected delegate to the State Society and L. M. Coy was elected alternate. Will J. Reed was elected to membership, and J. A. Connell was admitted to membership by transfer from Los Angeles.

SAN DIEGO COUNTY

San Diego County Medical Society (reported by Robert Pollock)—About twenty-five members of the San Diego County Medical Society attended the Southern California Medical Society meeting in Los Angeles, November 3 and 4. The practice adopted by this society of holding its meetings at the week end induces many men to attend who otherwise would not. This plan could be followed with advantage by contiguous County Societies in mutual exchange of discussion. An occasional joint meeting of two or more neighboring County Societies furnishes splendid opportunity for generating sociability, as well as a live interest in scientific programs.

At the regular meeting October 24, three papers were presented:

1. Treatment of Drug Addicts by Thatcher Miller, M. D.
2. Chaulmoogra Oil in the Treatment of Tuberculous Laryngitis; Chas. W. Brown, M. D.
3. An Analysis of the Electric Vibration Claims of Albert Abrams; A. E. Banks, M. D.

This last was a serious attempt to apply the scrutiny of modern electric science to the claims in question, and was listened to with extreme interest to a late hour in the evening.

The program of the regular meeting of November 14 carried two papers:

1. Discussion of Some of the Principles Underlying the Treatment of Heart Disease, by J. F. Churchill, M. D.
2. Physiotherapy, by A. D. Butterfield, M. D.

On November 18 the San Diego Society and the Imperial Valley County Societies plan to hold a joint meeting at El Centro with a Symposium on the Respiratory Tract.

SAN FRANCISCO COUNTY

Stanford's Special Diet Laboratory—Stanford University Medical School and Hospitals has estab-

lished a unique dietetic laboratory for ambulatory patients and other persons. This diet kitchen is open to the public and diets are furnished upon prescription of physicians. Certain special foods for treating diseases are sold over the counter and also formulas for infant food are scientifically prepared and dispensed. This diet kitchen makes a specialty of diabetic, nephritic and reducing diets.

SAN JOAQUIN COUNTY

San Joaquin County Medical Society (reported by Dewey R. Powell, secretary)—The regular monthly meeting of the San Joaquin County Medical Society was held at the Receiving Department, State Hospital on Friday evening, October 13. Those present were: Hudson Smythe, J. E. Nelson, H. S. Chapman, A. C. Boehmer, H. J. Bolinger, W. P. Lynch, L. Dozier, N. B. Gould, W. J. Barnes, I. B. Thompson, H. E. Sanderson, R. T. McGurk, Grace McCoskey, Minerva Goodman, E. L. Blackman, J. T. Davison, C. F. English, H. C. Price, W. E. Weirich, Geo. Cooper, F. J. Conzelman, A. H. McLeish, F. S. Marnell, C. R. Harry, F. J. Blinn, J. D. Dameron, W. Friedberger and D. R. Powell, with Frank Lynch and Leo Eloesser of San Francisco as guests and speakers of the evening. The first speaker of the evening was Frank W. Lynch of San Francisco who spoke on "Retroversion of the Uterus." Lynch cited his statistical study of 1230 women who had been followed from 4 to 12 months after delivery. He found that retroversion occurred in 44 per cent of his clinic patients and in 19 per cent of his private patients showing that hard work following delivery had some causative part in the development and frequency of retroversion. It did not seem to be due to vaginal relaxation or to forceps delivery and was not influenced by the number of pregnancies. 76 per cent of the retroflexions occurred the first four months after delivery and 25 per cent had no symptoms. The treatment recommended for the first five weeks was the Kangaroo walk and later the pessary treatment. 72 per cent were cured by pessary treatment and 68 per cent had the symptoms entirely relieved. There were 189 cases operated on with 3.3 per cent recurrences. The speaker emphasized the necessity in operative technique of having two points of support. The value of early corrections following labor was clearly evident and 15 per cent of his patients had subsequent pregnancies. Numerous questions were asked by members and answered by Lynch. Leo Eloesser spoke on "Diseases of the Peripheral Blood Vessels." He spoke first of hemorrhage due either to injury or disease. He discussed the value of elevating the limb to control venous bleeding and the compression of an artery by the finger rather than the tourniquet, which may be left on too long and cause subsequent gangrene. He advised against packing the wound and against suture, stating that the vessel should either be tied off or let alone. He stated that in severe cases of oozing of the vessels, transfusion was the only real aid and stated that chemical coagulants were useless. He spoke of the value of using raw fresh meat in cases of bleeding from the gums. In the treatment of aneurysm wait until after collateral circulation is established before operation. Syphilis either causes thin walls with resulting aneurysm or causes thickened walls with resulting obliterative endarteritis. The treatment was rest in bed, elevation of the legs to relieve congestion and the use of Beers bandages to cause hyperemia. Heat was not efficient. The incision of the tendon sheath was often a prophylactic measure in gangrene, avoiding amputation wherever possible. Eloesser showed several interesting specimens and a number of X-ray plates illustrating the points he had made in his talk. He answered numerous questions which were asked him during the discussion.

SAN MATEO COUNTY

San Mateo County Medical Society met with the Santa Clara County Medical Society at Palo Alto November 15.

California Sanatorium Announces Reduction in Rates—Beginning October 1, the officers of this institution announce that the pavilion rate will be reduced from $40 to $35 a week. This rate includes everything necessary for the treatment of the patient.

SANTA BARBARA COUNTY

Santa Barbara County Medical Society (reported by A. C. Soper, secretary)—The October meeting was held at the Cottage Hospital on the 23rd of the month, with President Mellinger in the chair. There were twenty-two members and four visitors. Samuel Robinson presented the subject of "Tubercular Abscess of the Chest Wall." Ullmann, Cunnane, Culler and Freidell joined in the discussion. R. Manning Clarke read a paper on "Thirty-two Cases of Peptic Ulcer." This paper was discussed by Freidell, Stevens, Flint, Means, Bogan, Cunnane, Nagleman, Ullmann, Brush and Sansum. Robert M. Culler was elected to membership.

Celite Products Company Hospital—The Celite Products Company Hospital, which was completely destroyed by fire last May, is being rebuilt.

SANTA CLARA COUNTY

Santa Clara County Medical Society (reported by E. P. Cook, secretary)—The Monterey, Santa Cruz, San Benito and Santa Clara Societies met together at dinner in Gilroy on the evening of October 18. Short, informal talks were given by several members of the different societies. E. C. Fleischner of San Francisco presented a paper on the subject of diphtheria. That the paper was thoroughly enjoyed was evidenced by the many questions which it aroused in the subsequent discussion. John Clark of Gilroy was the able toastmaster, and the physicians of Gilroy again proved themselves perfect hosts.

The Santa Clara and San Mateo County Medical Societies held a joint meeting at the United States Veterans Hospital, Palo Alto, on the evening of November 15. The business meeting was dispensed with, and Colonel R. L. Stanley presented a scientific program of unusual interest. Case reports were read by Captain Fred Beardon and Major A. O. Saunders. Refreshments were served following the program.

SONOMA COUNTY

Sonoma County Medical Society (reported by N. Juell, secretary)—The society met at Cloverdale, October 19, with ten members and five visitors present and twenty-five members absent. A. Thurlow delivered a very interesting address on "The Problem of the Unstable," the mental attitude of hysteria and similar conditions and how to handle them. McLeod discussed the problems confronting the medical profession in the coming campaign and a committee was appointed in each town of the county to distribute literature and otherwise aid in defeating the three anti-health measures on the ballot.

During the banquet served by Dr. Shipley, a plan for the better health campaign in the county was discussed. Mrs. Hatch, a member of the Santa Rosa Board of Education, asked the opinion of the society of a plan proposed to have each of the seven high school districts appoint a visiting nurse under the county health officer. Dr. Pryor, the county health officer, suggested the addition of two or three field workers and Rogers suggested that Sonoma County would be a good place to work out some such plan.

The society met also on November 9, with seven members present and twenty-nine absent. There

were also twenty nurses present as guests. Alson R. Kilgore of San Francisco gave a talk on "Early Cancer."

Nurses' Home at Petaluma General Hospital Damaged by Fire—The Nurses' Home of the Petaluma General Hospital suffered a considerable damage by fire recently, the interior of the lower floor being completely destroyed. The origin of the fire was traced to an electric iron left in the kitchen with the current on, the nurses having gone to the hospital proper, two doors away, for luncheon.

STANISLAUS COUNTY

Stanislaus County Medical Society (reported by R. E. Maxwell, secretary)—The October meeting was held at Hotel Modesto, beginning with a dinner. The following members were present: Bemis, Delappe, McPheeters, Surryhne, Reamer, Finney, Field, Benson and Maxwell. E. H. Falconer of San Francisco addressed the society on the subject of "Recent Progress in the Study of Primary Anaemia," illustrated by lantern slides. A. R. Kilgore of San Francisco gave a short talk on "Cancer Propaganda," with suggestions as to its significance to the medical profession.

L. J. Peters was admitted to the society by transfer from the Alameda County Society. I. B. Thompson was given a transfer to the San Joaquin County Society.

Gift to St. Mary's Hospital, Modesto, by Knights of Columbus—Plans for the purchase of a modern X-ray apparatus to be presented to St. Mary's Hospital are being carried out by the Knights of Columbus of Modesto.

TUOLUMNE COUNTY

The New Hetch Hetchy Hospital—A new one-story eight-bed hospital building, 50 by 130 feet, has been erected to replace the one lost by fire two months ago. The hospital has been equipped and is now receiving patients.

YOLO COUNTY

Yolo County Medical Society (reported by Lela J. Beebe, secretary)—The regular quarterly meeting of the society was held October 3 at the County Court House, Woodland, with the following members present: Bates, Beebe, Blevins, C. H. Fairchild, F. R. Fairchild, Goffin, Lawson, Lawhead, Newton and Ward. The following members were absent. Bransford, Craig, Derosier, King, McManus, Parsons, Poage and Keith. Dr. Hayes of the Department of Veterinary Science of the University of California and Dr. H. H. Johnson, Associate Secretary of the State Medical Society, were guests of the society.

Johnson made clear the plans of the State Society in regard to the problems of industrial medicine, and also discussed the three anti-health measures on the November ballot.

Annual Meeting of Nevada State Medical Association—The annual meeting was held at Reno, October 6 and 7, 1922. All records for attendance were broken, there being sixty-four physicians registered, which was eighteen more than at any previous meeting. The following officers were elected: President, J. LaRue Robinson, Reno; first vice-president, A. Huffaker, Carson City; second vice-president, R. H. Richardson, Reno; secretary-treasurer, Horace J. Brown, Goldfield; trustee for three years, W. A. Shaw, Elko; delegate to A. M. A., Horace J. Brown, Goldfield; alternate, J. LaRue Robinson, Reno. The papers presented were excellent, and the discussions showed that the members are deeply interested in every phase of the practice of medicine—Abstracted from Nevada Medical Bulletin, October 15, 1922.

BOOK REVIEWS

Radium Therapy—By Frank Edward Simpson, A. B., M. D. 391 pages with 166 original engravings. St. Louis: C. V. Mosby Company, 1922. Price $7.00.

Simpson has written a very complete text on the treatment of disease with radium. The exposition of the theoretical phase of the subject is clear, comprehensive and well arranged. The discussion of dosage is somewhat too technical for some physicians, but properly belongs in this type of book. The presentation of the technic of treating specific clinical entities is based on the author's wide experience and can safely be used as a guide to the beginner in radium therapy. It is disappointing that no mention is made of the value, in many cases, of roentgen therapy in combination with radium therapy, particularly when the amount of radium available is relatively small. Any one interested in the subject will find this book worth reading, though its lasting value is limited by the changes which are constantly being made in the technic of radium theraphy in the light both of clinical experience and laboratory experiment. L. R. T.

Diseases of the Thyroid Gland—By Arthur E. Hertzler, M. D., Professor of Surgery in the University of Kansas School of Medicine; Surgeon to the Halsted Hospital, Halsted, Kansas; Surgeon to St. Luke's Hospital and St. Mary's Hospital, Kansas City, Mo., and to Provident Hospital, Kansas City, Kansas. With a chapter on Hospital Management of Goiter Patients, by Victor E. Chesky, A. B., M. D., Associate Surgeon to Halsted Hospital. 245 pages, 106 original illustrations, St. Louis; C. V. Mosby Company, 1922. Price $5.00.

This is not a monumental monograph. It was not so intended. It is an account of personal experiences told without pomp, and without pretense of profound erudition. And as such it is to be commended. Its thought and diction are surgical. That is to say, it reads quickly, and its style is decisive, clean cut, snappy, at times almost breezy. One may not always agree with the author's views or procedures, but at least one is not left in doubt as to their nature.

The book contains no bibliography and no attempt is made to review the literature exhaustively, but appropriate references are interspersed here and there.

Its contents are predominantly clinical and a worthy emphasis is accorded to a proper appreciation of symptomatology, diagnosis and treatment, and yet the reviewer regrets the scant consideration given to the important differentiation between toxic adenoma and toxic hyperplasia (Grave's Disease), which is so fundamental in judging the clinical course, estimating the prognosis and deciding upon proper therapy.

The physician will not enthuse over the hasty notes and almost flippant attitude toward basal metabolism estimation and X-ray or radium therapy. The title of the book is misleading, for it contains no chapters on childhood myxedema, adult myxedema or hypothyroidism. It would better have been entitled "Some Types of Goiter and their Surgical Treatment." The author deserves commendation for his conservative attitude toward prognosis. He has observed his patients over a great many years and thoroughly appreciates the life-long character of thyroid disease, the rarity of absolute cure, and the questionable value of most statistics. The publishers deserve hearty commendation for the

fine paper, clear large type, and excellent reproduction of Tom Jones' handsome illustrations. The latter are superbly done, and combine practical value with artistic beauty.

The thyroid surgeon of great experience does not need this book for reference, but it is worthy of careful perusal by the surgeons who from time to time have occasion to operate on the thyroid gland. It is written principally for them and it will be to their advantage to have it handy. H. L.

BOOKS RECEIVED

An Outline of the Medical Service of the Theatre of Operations. By M. A. W. Shockley, Lieutenant-Colonel Medical Corps, U. S. Army, Philadelphia: P. Blakiston's Son & Co.

An Outline of Pirquet's System of Nutrition. By Dr. Clemens Pirquet, Professor of Pediatrics at the University of Vienna, Austria. 16mo of 96 pages. Philadelphia and London: W. B. Saunders Company, 1922. Cloth, $2.00 net.

Lectures on Dietetics. By Max Einhorn, M. D., Emeritus Professor of Medicine at the New York Post Graduate Medical School and Hospital; Visiting Physician to the Lenox Hill Hospital, New York. 12mo of 244 pages. Philadelphia and London: W. B. Saunders Company. 1922. Cloth, $2.25 net.

The Treatment of Fractures: With notes upon a few common dislocations. By Charles L. Scudder, M. D., Assistant Professor of Surgery at the Harvard Medical School. Ninth Edition, Revised. Octavo volume of 749 pages, with 1252 illustrations. Philadelphia and London: W. B. Saunders Company. 1922. Polished Buckram, $8.50.

Animal Parasites and Human Diseases. By Asa C. Chandler, M. S., Ph. D., Instructor in Biology, Rice Institute, Houston, Texas. Second Edition, Revised. New York: John Wiley & Sons, Inc. London: Chapman & Hall, Limited, 1922.

Our Medicine Men. By Paul H. DeKruif. 237 pages, illustrated, $1.75. New York: The Century Co. 1922.

Diseases of Women. By Harry Sturgeon Crossen, M. D., F. A. C. S., Clinical Professor of Gynecology, Washington University Medical School, and Gynecologist in Chief to the Barnes Hospital and the Washington University Dispensary; Gynecologist to St. Luke's Hospital; Consulting Gynecologist to the Jewish Hospital and the St. Louis Maternity Hospital; Fellow of the American Association of Obstetricians, Gynecologists, and Abdominal Surgeons. Fifth Edition, Revised and Enlarged, with 934 illustrations. St. Louis: C. V. Mosby Company. 1922.

The Writing of Medical Papers. By Maud H. Mellish, Editor of The Mayo Clinic Publications. Philadelphia and London: W. B. Saunders Company. 1922.

Injury, Recovery and Death, in Relation to Conductivity and Permeability. By M. J. V. Osterhout, Professor of Botany. Philadelphia and London: J. B. Lippincott Company.

A Text-Book of Human Physiology. By Albert P. Brubaker, A. M., M. D., LL. D., Professor of Physiology and Medical Jurisprudence in the Jefferson Medical College; Formerly Professor of Physiology in the Pennsylvania College of Dental Surgery; Formerly Lecturer on Physiology and Hygiene in the Drexel Institute of Art, Science, and Industry. Seventh Edition, Revised and Enlarged, with 367 illustrations. Philadelphia: P. Blakiston's Son & Co.

Polaris, The Story of an Eskimo Dog. By Ernest Harold Baynes, illustrated. New York: The Macmillan Company. 1922.

Gonorrhea and Impotency. Modern Treatment. By Edwin W. Hirsch, S. B., M. D., American Electrotherapeutic Association, First Lieut., M. C., U. S. Army. With an additional lecture on Ultra-Violet Radiation by A. J. Pacini, M. D. Illustrated. The Solar Press, Chicago. 1922.

Public Relief of Sickness. By Gerald Morgan. New York: The Macmillan Company. 1922.

Principles and Practice of X-Ray Technic for Diagnosis. By John A. Metzger, M. D., Roentgenologist to the School for Graduates of Medicine, University of California, Southern Division, Los Angeles. With 61 illustrations. St. Louis: C. V. Mosby Company. 1922.

Dental and Oral Radiography. A textbook for Students and Practitioners of Dentistry, By James David McCoy, M. S., D. D. S., F. A. C. D., Professor of Orthodontia and Radiography, College of Dentistry, University of Southern California, Los Angeles. With 116 illustrations. Third Edition. St. Louis: C. V. Mosby Company. 1922.

The Southern California Medical Society (reported by Egerton Crispin, secretary, and Wm. Duffield, president)—The Southern California Medical Society held its sixty-seventh semi-annual meeting in Los Angeles on the 3rd and 4th of November. This was the most successful meeting the Society has had. The attendance at the Friday evening session numbered over eight hundred persons. Among the out of town speakers were Walter Alvarez of San Francisco, who presented a study on "High Blood Pressure" based upon "An Analysis of Sixteen Thousand Measurements on University Freshmen and High School Students." Andrew Thornton of San Diego presented a timely paper on "Immunization Against Diptheria," presenting arguments for its "universal application." Lyell Kinney, of San Diego, discussed the "Pathologic Gall Bladder" from a Roentgenological standpoint. E. C. Rosenow, Mayo Foundation, presented a paper on "Experimental Studies of the Etiology of Disease of the Nervous System" with lantern slide demonstration and with motion picture films of animals, demonstrating the symptoms produced by injection of material from patients with lethargic and other forms of encephalitis, epidemic hiccup, spasmodic tortocollis and chorea. This study was an extensive and comprehensive presentation of scientific experimental work. Louis Wilson, Mayo Foundation, presented a philosophic discussion of the needs of physicians under the title "Factors in the Continued Development of the Physicians."

The spring meeting of the society will be held in Long Beach on the first Friday and Saturday in April. The following officers were elected for the coming year. President, Robert Pollock, San Diego; First Vice President, Dr. F. L. Rogers, Long Beach; Second Vice President, Joseph Swindt, Pomona; Secretary-Treasurer, Egerton Crispin, Los Angeles.

Pharmacology and Therapeutics

Edited by FELIX LENGFELD, Ph. D.

During October the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion in New and Non-official Remedies:

Lederle Antitoxin Laboratories: Diphtheria Toxin-Antitoxin (0.1L†).

H. A. Metz Laboratories, Inc.: Alumnol.

H. K. Mulford Company: Hay Fever Timothy Pollen Extract-Mulford.

Parke, Davis & Co.: Normal Horse Serum—P. D. & Co., Rabies Vaccine (Cumming)—P. D. & Co.

E. R. Squibb & Sons: Acne Vaccine, Colon Vaccine—Squibb, Gonococcus Vaccine, Meningococcus Vaccine, Normal Horse Serum, Pertussis Vaccine, Curative; Pertussis Vaccine, Immunizing; Purified Diphtheria Antitoxin (Antidiphtheric Globulin), Pneumococcus Vaccine, Staphylococcus Vaccine, Stachylo-Acne Vaccine, Streptococcus Vaccine, Tetanus Antitoxin Purified, Typhoid Vaccine, Typhoid Vaccine Combined, Immunizing.

NEW AND NON-OFFICIAL REMEDIES

Hayfever Timothy Pollen Extract-Mulford—The liquid is obtained by extracting the protcins from the pollen of timothy. For a discussion of actions, uses and dosage, see the article on "Pollen and Epidermal Extracts Preparations and Biologically Reactive Food Proteins," New and Non-official Remedies, 1922, p. 232. This preparation is marketed in packages containing fifteen consecutive doses for a complete treatment and also in packages containing partial treatments only. H. K. Mulford Co., Philadelphia.

Purified Diphtheria Antitoxin (Antidiphtheria Globulin)—Concentrated diphtheria antitoxin (New and Non-official Remedies, 1922, p. 280), is marketed in syringe containers of 1000 units and in syringe containers of, respectivcly, 3000, 5000, 10,000 and 20,000 units. E. R. Squibb & Sons, New York.

Normal Horse Serum—This product (New and Non-official Remedies, 1922, p. 278) is also marketed in packages of one 10 cc. syringe. E. R. Squibb & Sons, New York. (Jour. A. M. A., Oct. 21, 1922, p. 1427.)

Aluminum Compounds—Several aluminum compounds are official, including the ardinary alum. The acetate and acetotartrate of aluminum are used in the form of solutions described in the National Formulary. Aluminum compounds are used for their astringent action. They are not so astringent as the lead salts, but they may exert an irritant and even caustic action when used in the form of concentrated solutions or as "burnt" alum. Aluminum compounds are slightly antiseptic. Proprietary preparations of aluminum in combination with organic acids have been introduced with a view of utilizing the astringent and antiseptic properties of their components.

Alumnol—The aluminum salt of betanaphtholdisulphonic acid. Alumnol is used as a mild antiseptic and, in concentrated solutions, as an irritant or caustic. It is used for the destruction of the gonococcus in gonorrhea. H. A. Metz Laboratories, Inc., New York.

Novocain Base—Para-amino-benzoxydiethylaminoethane. The base contained in procaine. The action and uses of novocain base are the same as those of procaine (New and Non-official Remedies, 1922, p. 36), but it is soluble in fixed oils. H. A. Metz Laboratories, Inc., New York.

Novocain Nitrate—A brand of procaine nitrate—N. N. R. (New and Non-official Remedies, 1922, p. 37). It has the actions and uses of procaine, but is compatible with silver salts. H. A. Metz Laboratories, Inc., New York.

Diphtheria Toxin-Antitoxin Mixture (0.1L†)—A diphtheria toxin-antitoxin mixture (New and Non-official Remedies, 1922, p. 282) containing 0.1 lethal dose of diphtheria toxin neutralized with the required amount of diphtheria antitoxin. Marketed in packages of three vials, each containing 1 cc.; also in packages of thirty vials, each containing 1cc. Lederle Antitoxin Laboratories, New York.

Acne Vaccine—Acne bacillus vaccine (New and Non-official Remedies, 1922, p. 298) is marketed in packages of four syringes containing, respectivelv. 50, 100, 250 and 500 million killed bacilli; in packages of four ampules containing, respectivcly, 50, 100, 250 and 500 million killed bacilli (with a syringe); in vials of 5 cc., 10 cc. and 20 cc., each cubic centimeter containing 1000 million killed bacilli. E. R. Squibb & Sons, New York.

Gonococcus Vaccine—This product (New and Non-official Remedies, 1922, p. 301) is marketed in packages of four syringes containing, respcctively, 100, 250, 500 and 1,000 million killed gonococci; in packages of four ampules containing, respectively, 100, 250, 500 and 1000 million killed gonococci (with a syringe); in vials of 5 cc., 10 cc. and 20 cc., each cubic centimeter containing 1000 million killed gonococci. E. R. Squibb & Sons. New York.

Meningococcus Vaccine, Curative—Meningococcus vaccine (New and Non-official Remedies, 1922, p. 302) is marketed in packages of four syringes containing, respectively, 100, 250, 500 and 1000 million killed meningococci; in packages of four ampules containing, respectively, 100, 250, 500 and 1000 million killed meningococci (with a syringe), and in vials of 5 cc., 10 cc. and 20 cc., each cubic centimeter containing 1000 million killed meningococci. E. R. Squibb & Sons, New York.

Pertussis Vaccine, Curative—Pertussis bacillus vaccine (New and Non-official Remedies, 1922, p. 303) is marketed in packages of four syringes containing, respectively, 100, 250, 500 and 1000 million killed bacilli; in packages of four ampules containing, respectively, 100, 250, 500 and 1000 million killed bacilli (with syringe), and in vials of 5 cc., 10 cc. and 20 cc., each cubic centimeter containing 2000 million killed bacilli. E. R. Squibb & Sons, New York.

Pertussis Vaccine, Immunizing—Pertussis bacillus vaccine (see New and Non-official Remedies, 1922, p. 303) is marketed in packages of three syringes containing, respectively, 500, 1000 and 1000 million killed bacilli; in packages of three ampules containing, respectivcly, 500, 1000 and 1000 million killed bacilli (with a syringe). E. R. Squibb & Sons, New York.

Pneumococcus Vaccine—This product (New and Non-official Remedies, 1922, p. 304) is a suspension of killed pneumococci, Types I, II, III, and Group IV in equal proportions. Marketed in packages of four syringes containing, respectivcly, 100, 250, 500 and 1000 million killed pneumococci; in packages of four ampules containing, respcctively, 100, 250, 500 and 1000 million killed pneumococci (with syringe), and in vials of 5 cc., 10 cc. and 20 cc., each cubic centimeter containing 5000 million killed pneumococci. E. R. Squibb & Sons, New York. (Jour. A. M. A., Oct. 28, 1922, p. 1519.)

PROPAGANDA FOR REFORM

Afsal—Afsal is being marketed by S. Lewis Summers. It is stated to be "diacetyl methylene disalicylic acid." The product was formerly marketed by the Organic Chemical Manufacturing Co. (S. Lewis Summers, president) as Urasol. Urasol was one of a number of the "Forma-Sol Compounds" marketed by the Organic Chemical Manufacturing Co. and stated to be compounds of methylene-disalicylic acid. Sollmann reported in 1908 in an investigation made for the Council on Pharmacy and Chemistry that he had been unable to confirm the claims that were made for these compounds. A subsequent examination confirmed Sollmann's findings. (Jour. A. M. A., Sept. 7, 1922, p. 1264.)

Spahlinger's Treatment for Tuberculosis—Spahl-

inger, according to reports, was a lawyer who abandoned his profession for research work. He appears now to be connected with the Bacterio-Therapeutic Institute, Geneva. According to an article by Spahlinger, the treatment utilized either one or both of two therapeutic principles, depending on the nature of the infection. In acute cases, passive immunization with special serums is used. In chronic afebrile pulmonary cases, in non-pulmonary, and in cases "predisposed to" tuberculosis, active immunization with special antigens is employed. No definite information in regard to the preparation of the product is given. Reports that the British Red Cross is to purchase the treatment are unconfirmed. Reports that the Rockefeller Institute had made an offer to secure the rights for the product in the United States proved unfounded. The exact nature of the Spahlinger treatment does not appear to have been divulged, the treatment is in the experimental stage and the reported results lack confirmation. (Jour. A. M. A., Oct. 7, 1922, p. 1264.)

Radioactivity of Waters—Twenty-five years ago various mineral springs and waters were claimed to have therapeutic virtues because of their lithium content. Today we know that the amount of lithium in natural waters is insignificant, and that lithium is of no therapeutic value anyway. At the present time many mineral waters are exploited because of their asserted content of radium. However, the rationale of the internal administration of radium is being doubted. Also, relative traces of radio-active substances are practically valueless and the Council on Pharmacy and Chemistry will not accept any radium solution for internal use the dosage of which is less than two micrograms each day or any radium emanation generator which yields less than two microcuries emanation each twenty-four hours. The probable value of radio-active mineral waters may be judged when it is known that it would be necessary to consume 2810 gallons daily of the water yielding the largest quantity of temporary radio activity in order to obtain the minimum therapeutic dose of two microcuries emanation and that the best water available as regards radium content would require the administration of 1957 gallons per day in order to obtain two micrograms of radium. (Jour. A. M. A., Oct. 14, 1922, p. 1339.)

The Clinical Field of Yeast Preparations—In March, 1921, the Council on Pharmacy and Chemistry requested its Committee on Therapeutic Research to determine the advisability of undertaking a clinical study of the usefulness in therapy of yeast preparations. Accordingly, the chairman of that committee drew up a provisional plan which proposed to utilize the easily observable phenomena of growth, appetite and laxative effect as cumulative indices of all actions and to record this under a variety of normal and pathologic conditions. The plan was submitted to the committee and to others for an opinion. In consideration of the replies received and the unfavorable results published by A. L. Daniels and by A. F. Hess, the chairman of the committee recommended that the study be not inaugurated. The chairman reported that he had come to these conclusions: 1. Apart from the occasional imported cases of beriberi vitamin deficiency is not a recognized or diagnosable clinical entity in this country. 2. With ordinary diet yeast does not have any effect on growth, even of babies and children. 3. The one effect of yeast that has been definitely established is the laxative effect. This may be useful in chronic constipation, but no direct method of study is at present available for determining its advantages or disadvantages in comparison with other laxatives. After considering the recommendations of its Research Committee, the Council for the present decided against an investigation into the problematic usefulness of yeast as a therapeutic agent. (Jour. A. M. A., Oct. 14, 1922, p. 1354.)

Arsenauro—Some ten to twenty years ago, this preparation had considerable vogue. It is believed to be similar in composition to solution of gold and arsenic bromid of the National Formulary. This contains bromid of gold and arsenic acid. Gold preparations were at one time believed to have therapeutic value, particularly as "alteratives." They have proved inefficient and have been discarded. (Jour. A. M. A., October 21, 1922, p. 1446.)

Clearo—This was a "patent medicine" sold by C. E. McCuistion, Dallas, Tex., doing business as "The Clearo Co.," as a cure for tuberculosis, asthma, bronchitis, hayfever, serious throat and lung troubles. An investigation by the postoffice authorities led to the conclusion that the product was worthless for the purposes claimed, and that the Clearo Co. was engaged in a scheme for obtaining money through the mails by means of fraud. The Clearo Co. has been denied the use of the mails. (Jour. A. M. A., Oct. 21, 1922, p. 1445.)

A Pancreatic Hormone in Diabetes—Since the discovery of the important role of the pancreas in carbohydrate metabolism in the body there have been many attempts to supply the missing "regulator" of sugar combustion, and attention has naturally been centered on the pancreas in this connection. Significant results have been secured in the Department of Physiology at the University of Toronto by J. J. R. Macleod and his collaborators. An alcoholic extract of pancreas has been prepared, which apparently enabled the diabetic animal and man to metabolize sugar better. The investigators are wisely withholding the product from general use until its value is definitely established. (Jour. A. M. A., Oct. 21, 1922, p. 1428.)

Typhoid Vaccination by Mouth—Besredka has proposed vaccination against typhoid by mouth. His vaccine consists of a pill of bile and a tablet containing a mixture of heat-killed typhoid and paratyphoid bacilli. These are taken three mornings in succession. It is for the future to determine whether or not the method has value. (Jour. A. M. A., Oct. 21, 1922, p. 1446.)

The Reactions of Boston to the "Reactions" of Abrams—Abrams gave a clinical demonstration of his methods in the laboratory of one of his disciples in Boston. Abrams refused to submit the method, it is said, to any test offered, but confined himself to demonstrating the presence of lesions, the existence of which would be proved only by post-mortem examination. A member of the staff of the Boston Medical and Surgical Journal, a man in perfect health, was selected for experiment. By his diagnostic methods, Abrams discovered in this healthy individual a streptococcus infection, tuberculosis of the intestinal tract, congenital syphilis, and intestinal sarcoma. Otherwise, the man was all right. It is understood that the volunteer inconsiderately refused to submit to a post-mortem examination. (Jour. A. M. A., Oct. 28, 1922, p. 1524.)

Susto—According to the trade package, Susto is a "Vitamin Tonic Food in Concentrated Form, Rich in the Vitamins of Rice, Eggs, Milk and Yeast, Notably rich in Fat Soluble and Water Soluble Vitamins A, B, C, together with Beef Proteins, Nucleins and Iron." Susto is put on the market by Chester Kent & Co., Boston, better known as the sellers of Vinol. Vinol was essentially an alcoholic tonic, containing unrecorded amounts of iron, manganese peptonates, iron and ammonium citrate, lime and soda glycerophosphate, beef and codliver peptone, cascarin and sodium silacylate and 18 per cent alcohol. Some years back Vinol was advertised as a codliver preparation without oil. Vinol seems to have been made for Chester Kent & Co. by Frederick Stearns & Co., the firm which made Stearn's Wine of Codliver Extract with Peptonate of Iron. When alcohol tonics were no longer good form, Chester Kent & Co. employed Philip B. Hawk, Professor of Physiologic Chemistry at Jefferson Medical College, Philadelphia to "perfect" a product that was sent him as Vinol

Powder. Hawk did this: He also furnished the company with clinical reports and experimental data that could be counted on as valuable advertising thunder. Thus was born Susto. Patent medicine exploiters are cognizant of the fact that the public can be more easily humbugged on the food tonic scheme than by any other, particularly so when they can get the active co-operation of men whose scientific training should put them above such things. For one dollar the purchasers will get a few cents' worth of food material.

"Dimol: A New Intestinal Antiseptic." (reported by R. F. Stratton, M. D., Oakland). "Probably other members of the profession have received pamphlets and trade notices concerning the above named English pharmaceutical in which the astonishing claim is made that it possesses a bactericidal power thirty-five times that of phenol, without irritating or toxic qualities. The range of usefulness of a therapeutic agent having such remarkable attributes is evident.

In its department "Reports and Analytical Records from the Lancet Laboratory" the issue of that journal for April 19, 1921, referring to dimol, appears the statement "Tests made for us confirm a coefficient of 35.0 and freedom from toxicity claimed by the manufacturers. In view of its importance, a further investigation and confirmation of this seemed justifiable, even desirable.

Special conditions rendered it inadvisable to await a report from the Council of Pharmacy of the American Medical Association, and at my request, the Western Laboratory of Oakland conducted a series of experiments, following the method of the Hygienic Laboratories, U. S. Public Health Service, showing that the specimen of the drug obtained by me in the open market and submitted to them for examination had a phenol coefficient, not of thirty-five (35.0) as announced, but only of eight-tenths (0.8).

Search of subsequent issues of the Lancet to that above mentioned fails to discover any later modifications of their report."

BUSINESS AND THE BUSY PHYSICIAN

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NEW ADVERTISERS

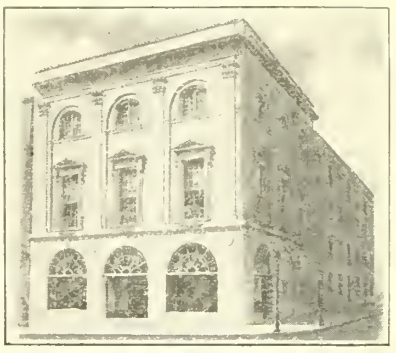
Among the new advertisers in this issue of the Journal are:

G. D. Searle & Co. of Chicago, whose Los Angeles representative is Paul McConnell, 1943 Bonsallo Ave. They have entered the California field with a line of tablets, ointments, liquids and other fine pharmaceuticals. They will be glad to furnish their catalogue and answer any other inquiries from physicians and hospitals.

Howard-Holt Company of Cedar Rapids, Iowa, announce themselves as chemists to the medical profession. Their advertisement of Siomine has been accepted by the Council on Pharmacy and Chemistry, and their advertisement as appearing in this issue of the Journal has been secured for us by the Co-operative Medical Advertising Bureau of the A. M. A.

The Cilkloid Co. announce in a one-half page advertisement in this issue of the Journal (which was secured for us by the Co-operative Medical Advertising Bureau) an improved impervious, perforated surgical dressing. The products of this company are for sale by local and surgical supply houses in Los Angeles and San Francisco. An old advertiser in the Journal dealing with the same line of goods is, Welton & Company, whose product is known as "Cellosilk."

Richter & Druhe, 604 Mission Street, San Francisco. This firm has recently opened offices in San Francisco and have a half page advertisement in this issue of the Journal. They are importers of European white enamel hospital and surgical ware. The quality of their goods, their methods of salesmanship and their integrity as a business house have been accepted by the committee controlling advertising columns of the Journal. They desire to make business contracts with hospitals and physicians. Other advertisers dealing with the same line of goods, who have been known to our readers for many months are, Reid Bros., 91-99 Drumm St., San Francisco; Geo. H. Ramage Co., 411-412 Bank of Italy Bldg., Fresno; Travers Surgical Co., 372 Sutter St., San Francisco; Walters Surgical Company, 441 Sutter St., San Francisco; Bischoff's Surgical House, Oakland; Frank S. Betz Co., Hammond, Ind.



The New Home of Hynson, Westcott & Dunning of Baltimore

This national drug firm has just erected and occupied its own building at Charles and Chase Streets, Baltimore. The building is artistic in appearance and adapted to accommodate the several departments of their rapidly developing business which began in a small way in 1889, but has now grown to a million a year, with an organization of 125 people. Their unique sales department alone comprises 19 men who visit physicians in all parts of the United States, but do not sell goods. Thirty-five of their products have been accepted by the Council, and are advertised in this Journal. None of their preparations is offered direct to the public but is introduced to the medical profession for the use of physicians and their patients. Mr. H. P. Hynson, one of the founders, died in 1921; but their growing business has now been established in new quarters under the immediate supervision of Messrs. James W. Westcott and H. A. B. Dunning (the latter being the active administrator) with a highly trained force, equipped to meet promptly the demands of the medical profession anywhere and at all times.

Abbott Laboratories Expand—The Abbott Laboratories of Chicago have purchased the Dermatological Research Laboratories of Philadelphia. This is an advance step for the Abbott Laboratories and will give them deserved recognition among the leading manufacturers of medicinal products. The Dermatological Research Laboratories were the first in the United States to produce Arsphenamine during the war when there was such a scarcity of this article; and these Laboratories became well known to the medical profession for their patriotic attitude in developing and manufacturing medicinal preparations in this country. By this purchase of "DRI" products, the Abbott Laboratories inherited their prestige. The Abbott Laboratories acquired control of the Dermatological Research Laboratories on November 1 and are continuing to operate them in Philadelphia under the direction of Dr. Geo. W. Raiziss, head of the department of Chemistry, and his corps of assistants.

CORRESPONDENCE

Ethan H. Smith comments on G. J. McChesney's article in the October issue of the Journal, subject, "The Modern Treatment of the Weak or Flat-Foot":

"In the October number of the California State Journal of Medicine, is a very excellent article by Dr. G. J. McChesney of San Francisco, on 'The Modern Treatment of the Weak or Flat-Foot.'

"I would like to consider a few of the points made by Dr. McChesney in his article.

"Dr. McChesney, together with many other orthopedic surgeons, seems to have overlooked some of the fundamental principles on which flat-foot should be handled. They confuse what might be termed the active stage of flat-foot, with what might be termed the active stage of flat-foot, with what might be termed the convalescent stage. They also lay too much stress on the arch of the foot, and do not give enough consideration to the accompanying condition in the muscles of the leg.

"The so-called 'spring ligament' has so few elastic fibres in it, that we can afford to forget them. The elasticity of the normal foot is not dependent on one ligament, but on the construction of the whole foot associated with the leg muscles, all of which are so arranged as to give a considerable elasticity to the foot and leg under normal conditions.

"We do not put splints on normal legs, yet we do put a support on a broken leg. So when the longitudinal arch of a foot is buckled inward, causing a marked abduction in the front of the foot on the head of the astragalus, and the corresponding abduction of the os calcis underneath the astragalus, and then the buckled arch rotates downward by the giving way of both tibial muscles, it is folly to talk of restoring this condition without correcting the deformity. The reason for that is, that we have too weakened and well-nigh useless, partially atrophic muscles incapable of performing their usual function, pitted against markedly contracted peronei muscles and also contracted calf muscles. Unless the arch is restored, and in severe cases placed in Plaster of Paris, and in milder cases held in position by a suitable support, we shall get nowhere with marked cases of flat-foot.

"We must also differentiate between the acquired flat-foot which has become distorted after having been normal during a great many years, and the real weak foot of childhood which is flat not because of overstrain and injuries such as cause the adult type of flat-foot, but because of the delayed ossification of the bones of the medio-tarsal region. These cases of weak-foot are by far more difficult to treat, and can never be restored by exercises, tilting of shoes, or any other such measures. They must be kept in position until such time as the bones have become thoroughly calcified and capable of carrying the weight of the patient's body, and also bearing the strain on the muscles in the act of locomotion.

Depending alone on the tilting of the heel and sole of the shoe, together with what should always be a convalescent treatment by massage and exercises, is likely to be just as successful as treating a broken leg without support of any kind from the date of injury. It will frequently result in arthritis, a metarso-phalangeal joint of the middle toe, a huge corn on this side, and corns on and between the third, fourth and fifth toes. Only this, and nothing more.

"Metal arch supports are an abomination. All of them, with one or two exceptions, are the shape of a bad flat-foot, and could not be endured for one-half hour if they were otherwise. Those that are not so are as comfortable as a steel trap on the foot, and that means, 'enough said.' The modeling of the foot for metal arch supports, as it is most frequently done, is a farce, and results in perpetuating the deformity. It also frequently augments the trouble by setting up a frightful arthritis in the inner portion of the medio-tarsal joint. It causes enlargement and thickening of the scaphoid and internal cuneiform bones, making them of such shape that they can never be restored to any semblance of the normal.

"Many of Dr. McChesney's ideas are good, but they are not applicable to the beginning of treatment of marked cases of flat-foot."

Dr. McChesney's reply to Dr. Smith's comments is as follows:

"I can agree in the main with Dr. Ethan Smith's ideas. I did not discuss the various kinds of flat-foot and treatment thereof in such detail as he would have liked, solely because the length of my paper was definitely restricted, as it was read at the Orthopedic Section meeting at the last State meeting, and I presented the basic factors of "The Modern Treatment of the Weak and Flat-Foot" the best I could in the fifteen minutes allotted. His emphasis upon my ideas regarding the importance of the leg muscles and the inadvisability of metal arch supports meets quite with my approval. Perhaps in exceptional cases a temporary arch support of some soft material is indicated as he infers, but the number of such exceptional cases is less than he would have us believe."

NEW MEMBERS

Alameda County: Childress, Hugo, Oakland; Crane, W. W. Jr., Oakland; Appeldorn, H. H., Piedmont; Fowler, Charles B., Oakland.

Fresno County: Pendergrass, James E., Clovis; Minas, Yervant, Fresno.

Los Angeles County: Ruth, Edward S., Los Angeles; Franklin, E. S., Los Angeles; James, Robert J., Los Angeles; Post, James O., Los Angeles; Brill, Wm., Los Angeles; McGee, Harry S., Los Angeles; Otto, Frank W., Los Angeles; Brandes, Leo, Los Angeles; Strathearn, H. J., Los Angeles; Munroe, Harrington B., Los Angeles; Webster, John C., Los Angeles; Brunig, H., Los Angeles; Miller, Allan P., Los Angeles; Chapman, James W., Pasadena; Tilton, Albert L., Los Angeles; Wallace, Alexander, Los Angeles; Hertzikoff, Sam, Los Angeles; Schmoele, John M., Los Angeles; Pomeroy, George T., Burbank; Harrison, Elake, Los Angeles; Sauer, Frank J., Bowers, Paul E., Los Angeles, Kegley, E. A., Los Angeles; Stevens, Harold E. E., Burbank; Gundrum, Willis H., Owensmouth; Magnusson, Herman V., Bell; Schaefer, J. W., Los Angeles; Crowell, T. C., Los Angeles; King, Ernest Harold, Los Angeles; Jones, George W., Los Angeles; Frisch, Adalbert, Los Angeles.

Transferred to L. A. County: Cox, Edward, to Los Angeles from Fresno; Dickson, G. G., to Los Angeles from Sacramento.

Monterey County: Lineer, A. S., Soledad.

Orange County: Crain, A. N., Santa Ana; Steen, E. J., Fullerton; Hollingsworth, M. W., Anaheim; Ball, D. R., Santa Ana; Harwood, D. W., Santa Ana; Farrage, J., Santa Ana.

San Diego County: Osborne, Albert, San Diego; Tow, Johanna E., San Diego; Newman, Willard H., San Diego.

San Francisco County: Kaarboe, Olav, San Francisco; Paul, Burton E., San Francisco.

Santa Barbara County: Culler, Robert M., Santa Barbara.

CURTIS GEORGE KENYON

The death of Curtis G. Kenyon marks the passing of one of San Francisco's pioneer surgeons. Doctor Kenyon was born in 1846 and received his degree of Doctor of Medicine from the College of the Pacific, November 4, 1873, and was licensed to practice in California September 19, 1876. He began his practice in San Francisco as Resident Physician at St. Mary's Hospital. He was an assistant to Dr. Levi Cooper Lane, under whom he received his surgical training. In 1889 Doctor Kenyon was appointed Visiting Surgeon to St. Luke's Hospital and continued as such until his retirement in 1919, acting for many years as Chief of Staff, and on his retirement was made Surgeon Emeritus.

He was an outstanding figure in all movements calculated to advance medical education, methods of practice, medical organization, and all other movements looking toward better public health and better medicine.

He was a member of many of the scientific societies to which physicians aspire; had filled practically all offices in local and State medical organizations, and had been for more than twenty years, without interruption and almost without absence from a meeting, Chairman of the Council of the Medical Society of the State of California.

He was an able surgeon, a splendid citizen and a useful member of society. Perhaps no physician in California had more friends and fewer enemies. He is survived by Mrs. Kenyon and two sons.

The death that terminated this useful life was the result of an automobile accident which occurred in Hollywood, where he was living with his son, the well known author of "Kindling" and other plays. He died at St. Vincent's Hospital, Los Angeles, November 8, 1922. The funeral services were held there on Monday, November 13, 1922. The pallbearers were Doctors T. C. Edwards of Salinas, C. Van Zwalenburg of Riverside, Henry C. Brainerd, W. T. McArthur, William Duffield and Clarence Toland of Los Angeles.

The medical profession and a host of friends suffer a distinct loss in the passing of Curtis G. Kenyon.

HAROLD P. HILL.

DEATHS

Bryant, C. W., Died at Tepic, Mexico, September, 1922, aged 64. He was a graduate of Hospital College of Medicine, Central University, Kentucky, 1888; and practiced his profession in Shasta County for thirty years, until he went to Mexico a few years ago.

Figgins, Daniel W., Died at San Diego, September 15, 1922, aged 69. Graduate of College of Physicians and Surgeons, Iowa, 1877; licensed in California, March 6, 1889.

Keys, Ernest Melford, Died at Alameda, November 2, 1922, aged 65. Graduate of College of Physicians and Surgeons, Iowa, 1878. Licensed in California November 6, 1889.

Kiger, Thomas C., died at Los Angeles, November 2, 1922, aged 87. He was a graduate of Western Medical College, Cleveland, Ohio, 1857. He came to California in 1876 and practiced in Ventura until 1881, when he moved to Los Angeles, where he has actively followed his profession for 41 years.

Prather, Demetrius J., Died at Laton, California, October 5, 1922, aged 73. Graduate of Louisville Medical College, Kentucky, 1876. Licensed in California February 11, 1898.

Scott, Charles L., Died at Hanford, California, September 4, 1922, aged 49. Graduate of Keokuk Medical College, Iowa, 1898. Licensed in California January 3, 1899.

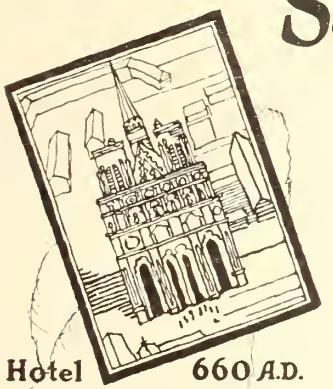
Shine, Francis E., Died September 8, 1922, in the American Hospital in Neville, France, aged 51. He was a graduate of the University of Virginia, 1895. Doctor Shine was chief surgeon of the El Paso and Southwestern Railroad from 1903 to 1920, and chief surgeon of the Phelps Dodge Corporation, Bisbee, Arizona, 1903 to 1920. He was licensed in California November 3, 1920, and resided in Los Angeles at the time of his death, having gone to France only a short time before on a vacation. He was a member of the Los Angeles County Medical Society, State Medical Society, American Medical Association, and other medical organizations, and was a major, M. C., U. S. Army.

Trueworthy, John Wesley, Died in Los Angeles, September 10, 1922, aged 69. He was a graduate of University of Michigan and received his M. D. degree from Rush Medical College, 1865. He had practiced medicine in Los Angeles for thirty years, having retired from active practice only two years ago. He was a member of the Los Angeles County Medical Society; the State Medical Society and the American Medical Association.

Warren, H. S., Died in Yreka, California, September 21, 1922, aged 39. He was a graduate of Cooper Medical College, 1905, and began the practice of medicine at Montague in 1906. He later practiced in Coalinga and San Francisco, but returned to Humboldt County, where he remained until his death. He was superintendent of the County Hospital at the time of his death, and was a member of the Humboldt County Medical Society and the State Medical Society.

Weldon, William A., Died at San Pedro, September 7, 1922, aged 59. Graduate of Medical Department Bowdoin College, Maine, July 6, 1884. He came to California in the same year and had resided in San Pedro almost continuously from that time until his death, being closely identified with the growth and development of Los Angeles County. He was a member of the Los Angeles County Medical Society and the State Medical Society.

Paris *in* 660 *and* San Francisco *in* 1921



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Typifying the hospital of mediaeval ages, Hotel Dieu, built in Paris in 660 A.D., is representative. In those days, wards were heated with charcoal stoves; patients slept on mattresses of straw thrown over a network of ropes; pillows were knots of twisted cloth. Hospitals were few, poorly equipped and sanitary conditions deplorable.

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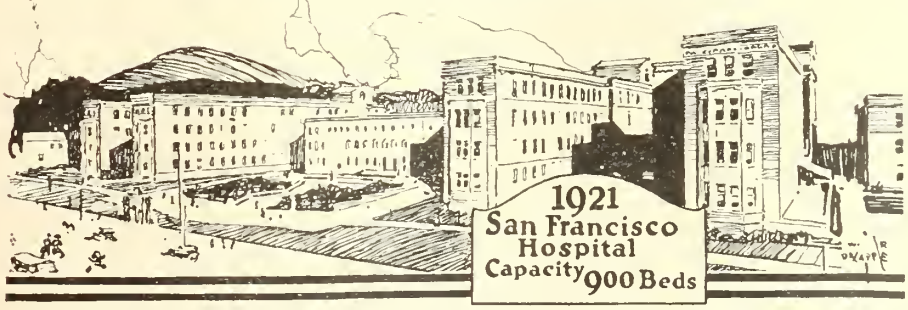

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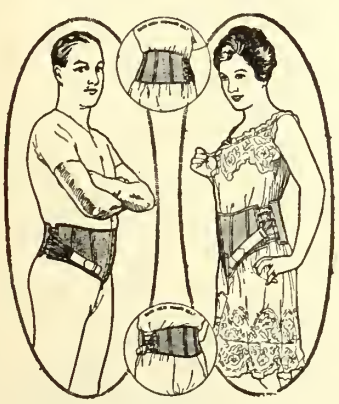

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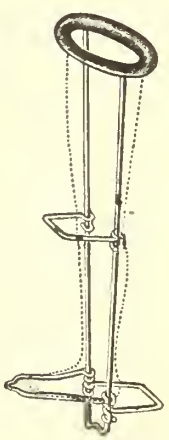

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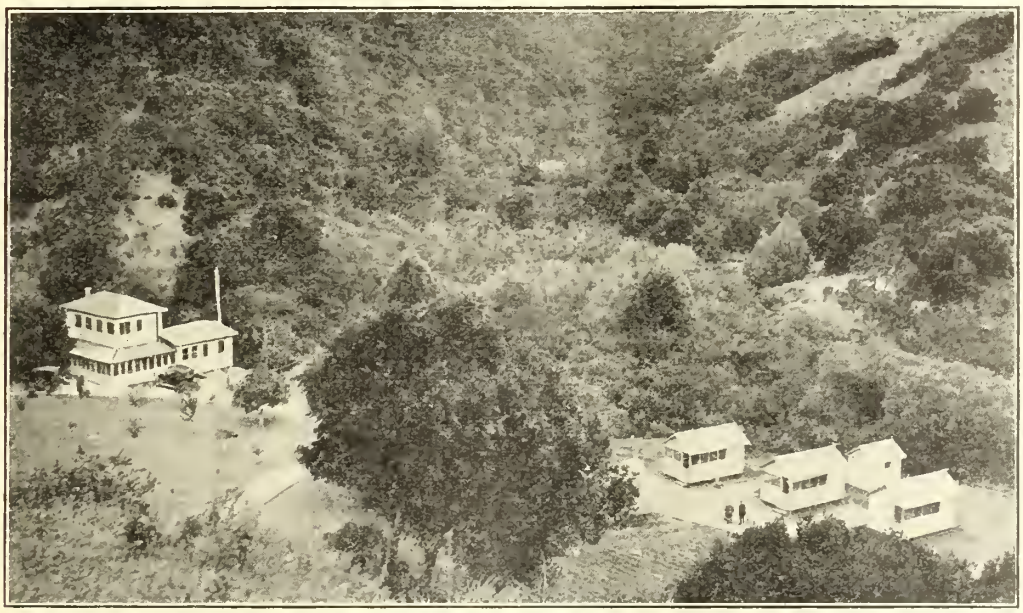

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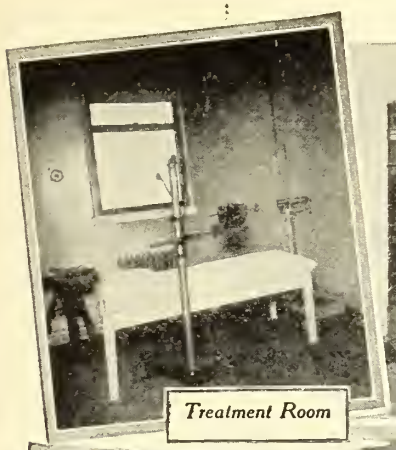

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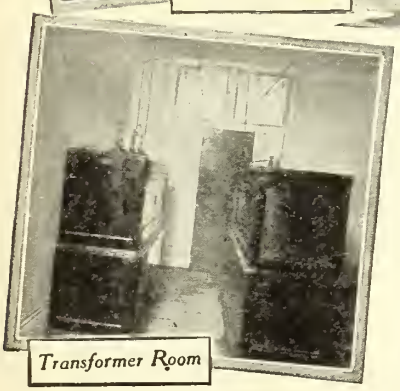
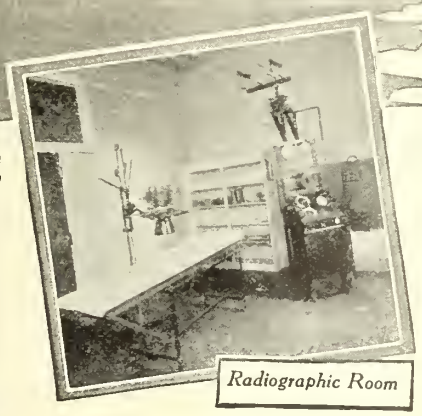


Transformer Room



Radiographic Room

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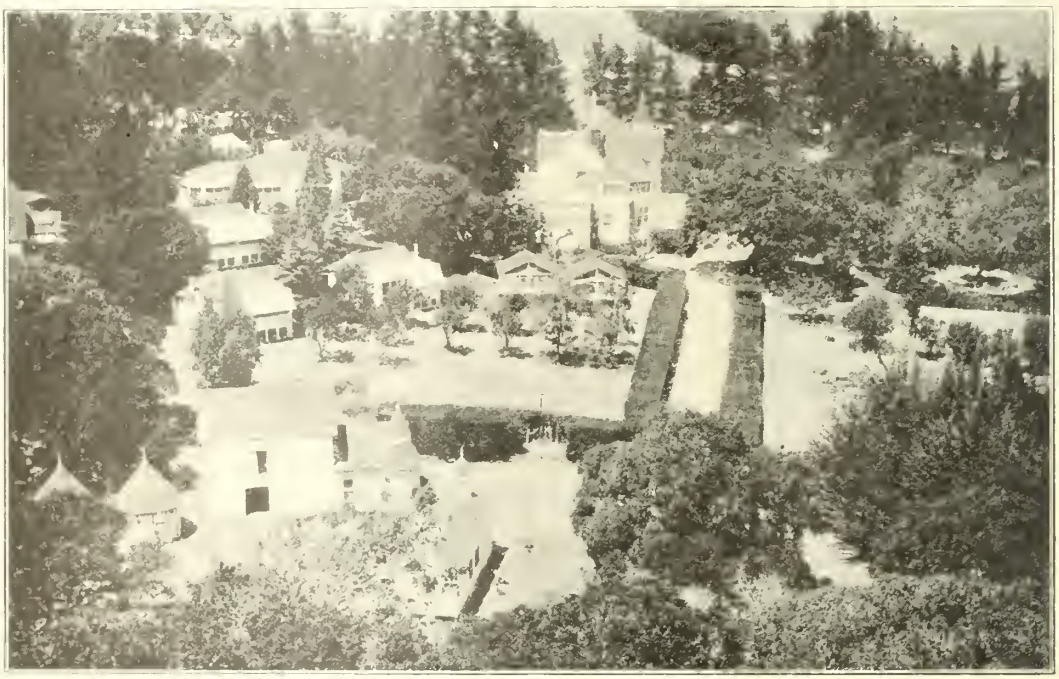

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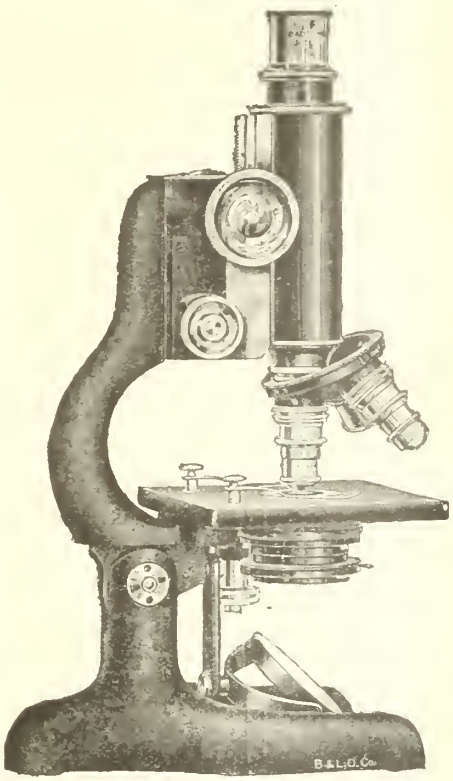

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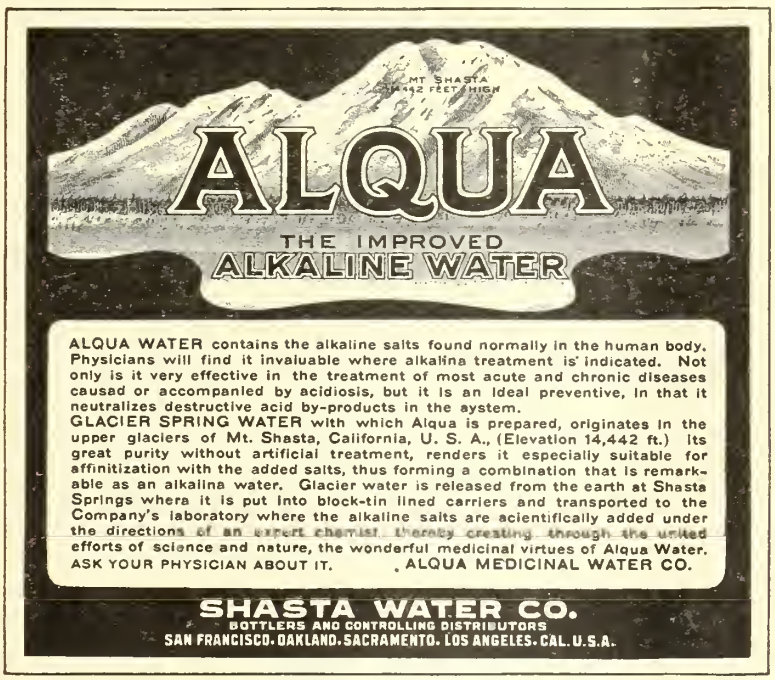

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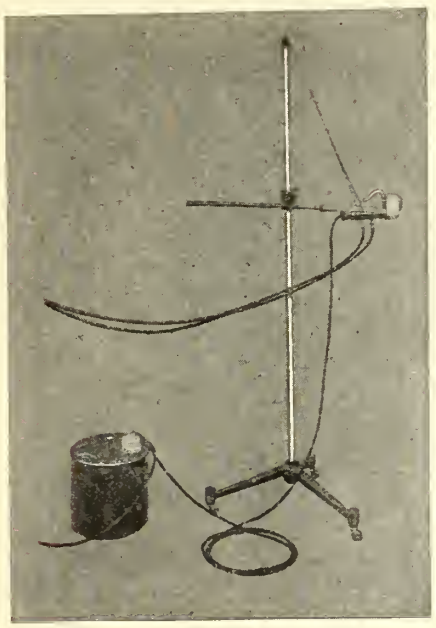

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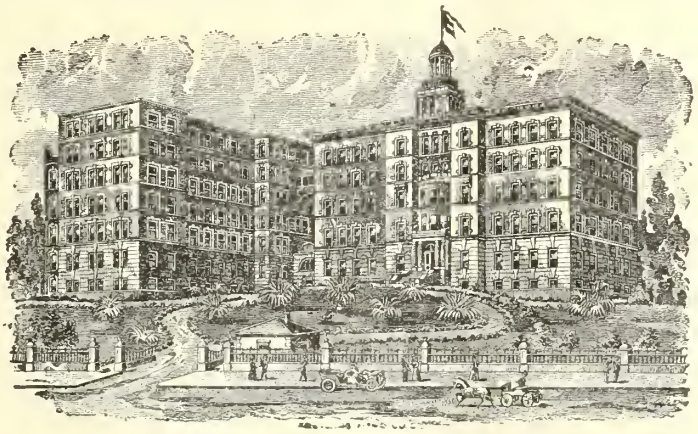

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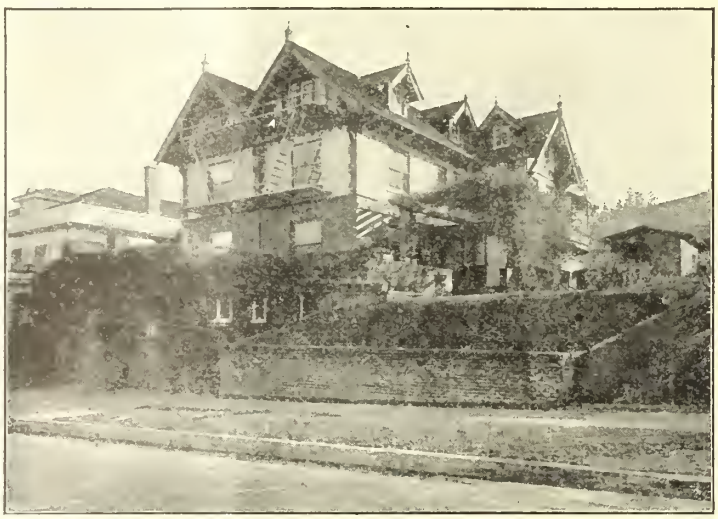

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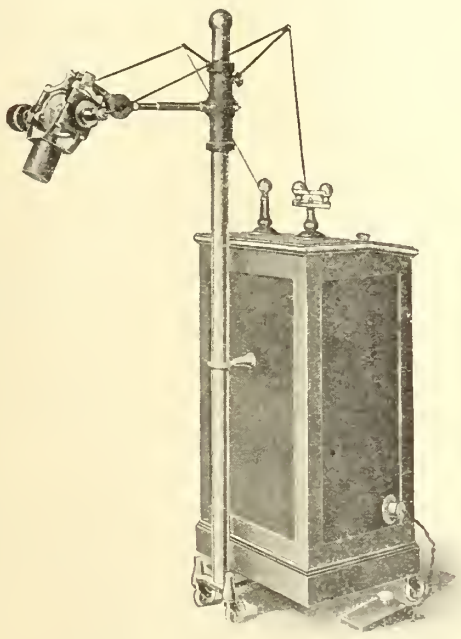

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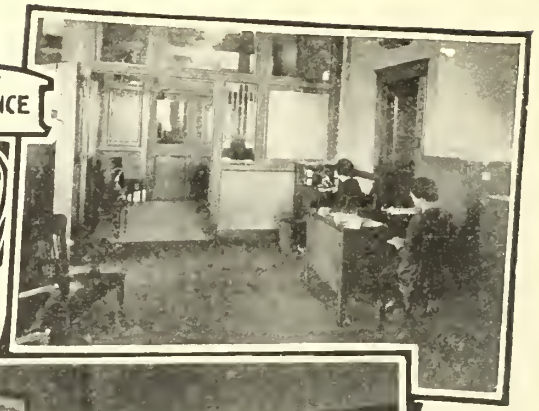

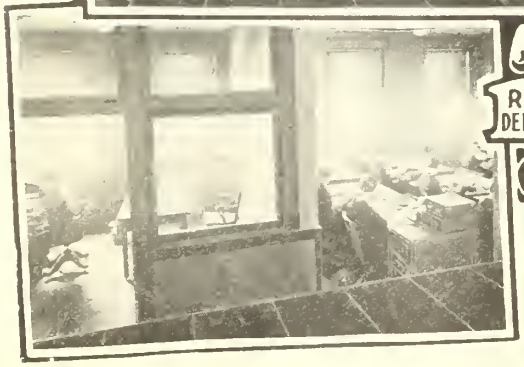

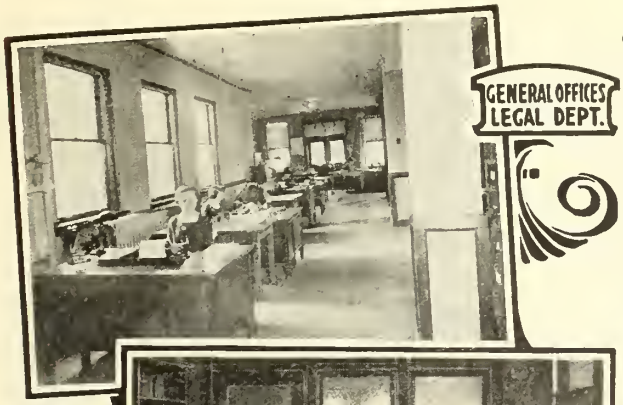

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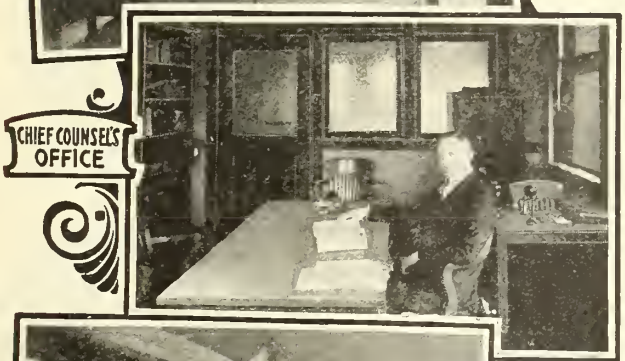

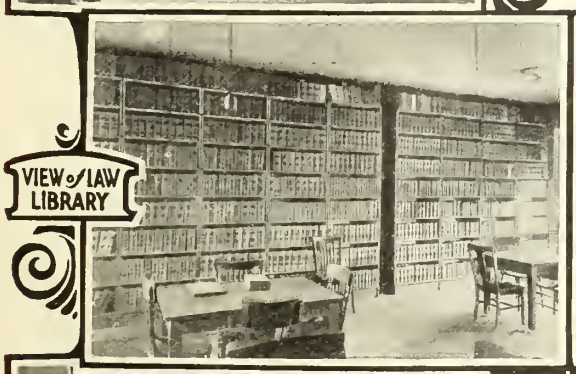

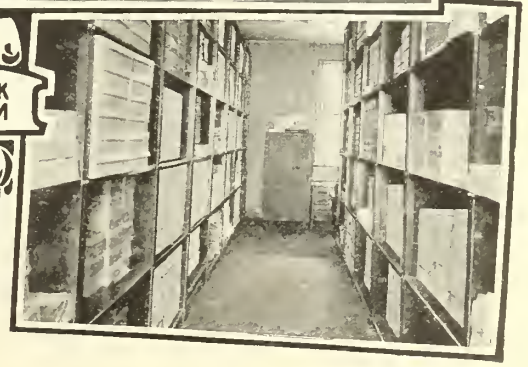

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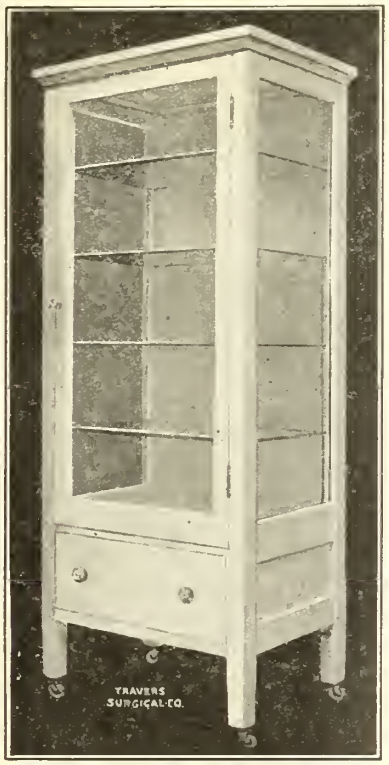

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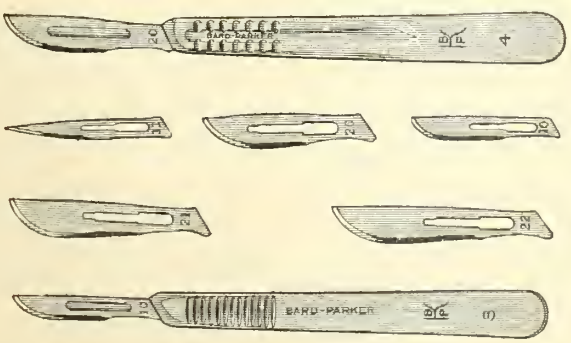

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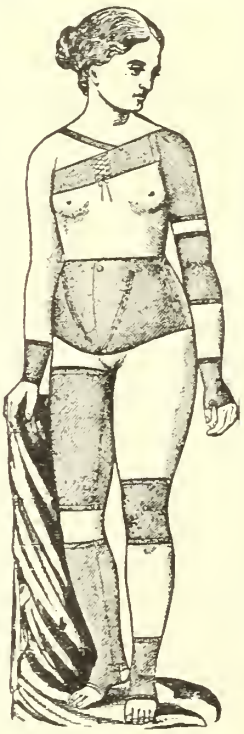

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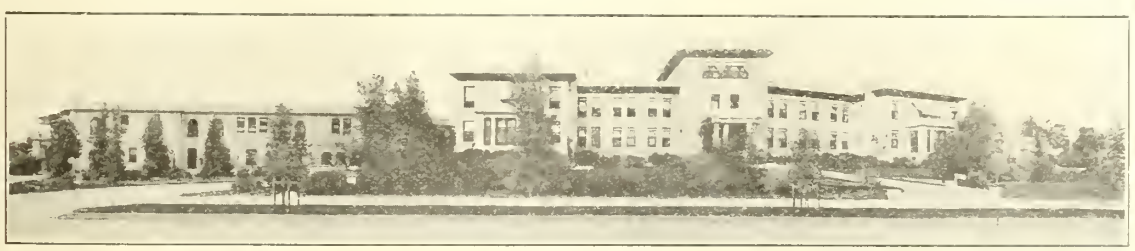

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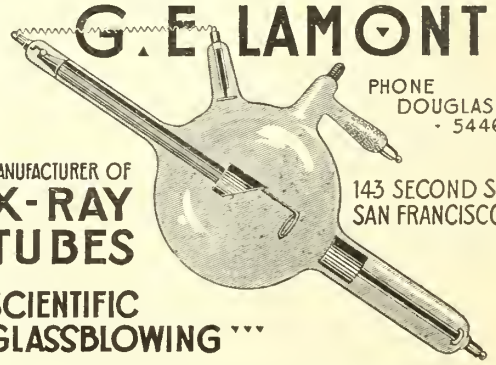

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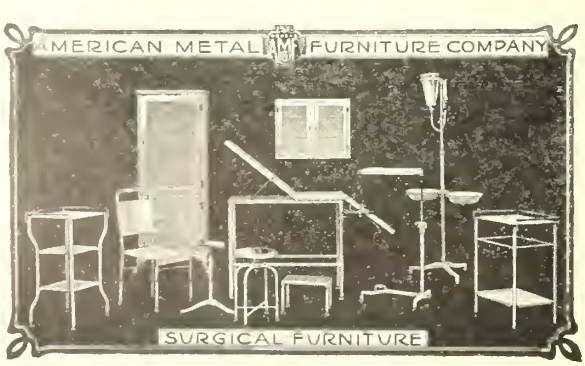

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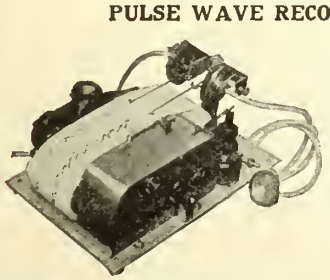

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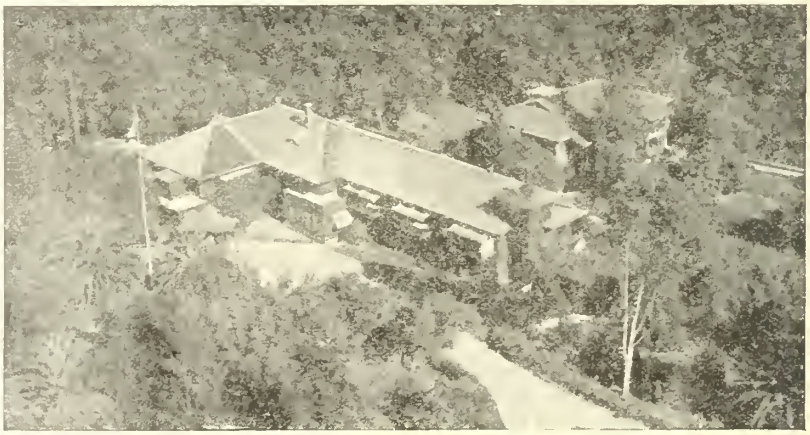

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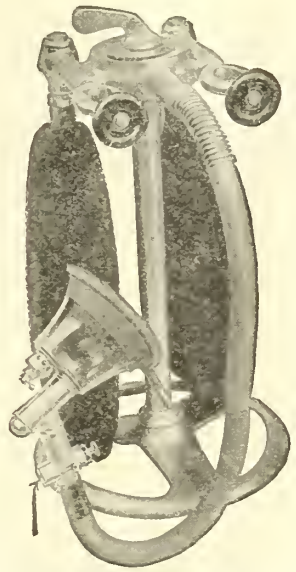

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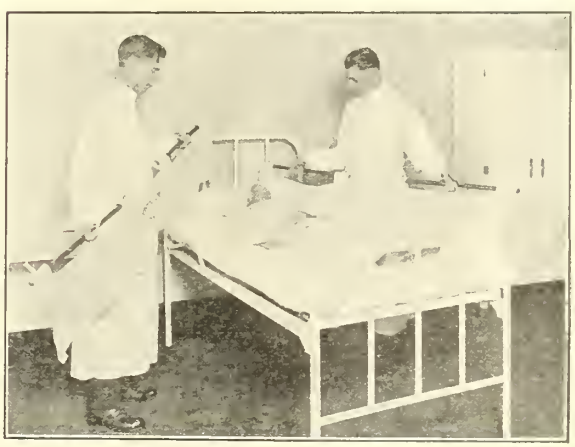

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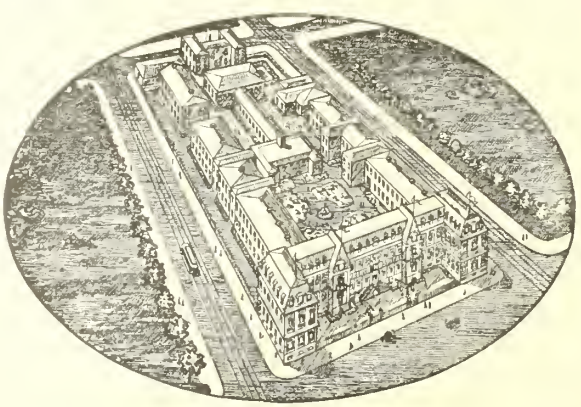

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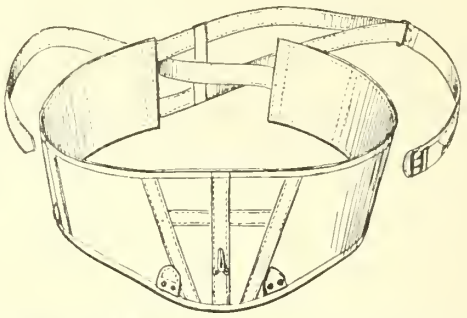

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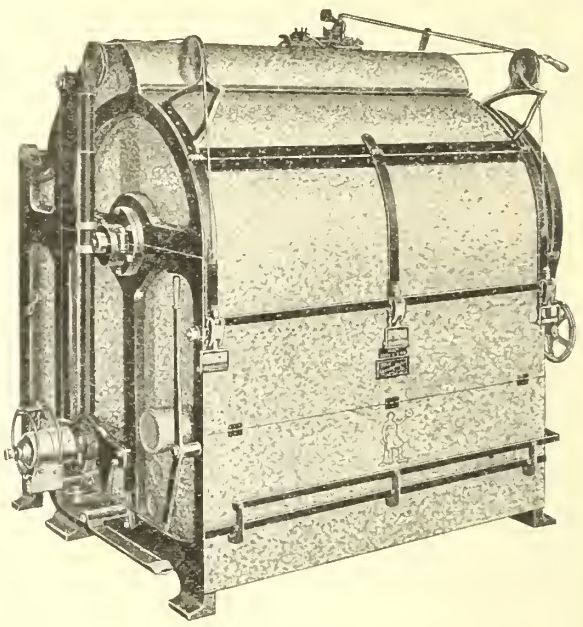

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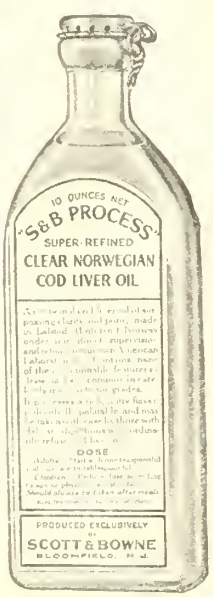

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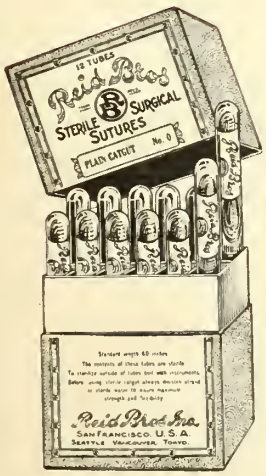

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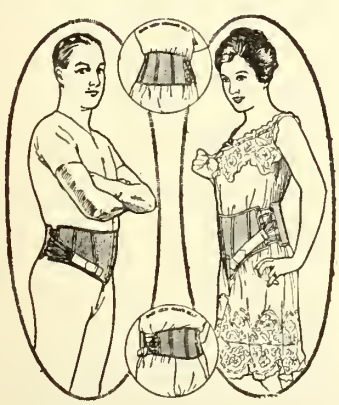

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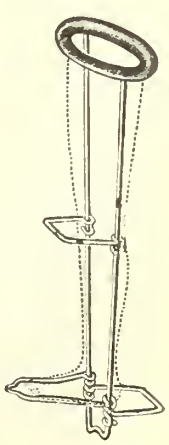

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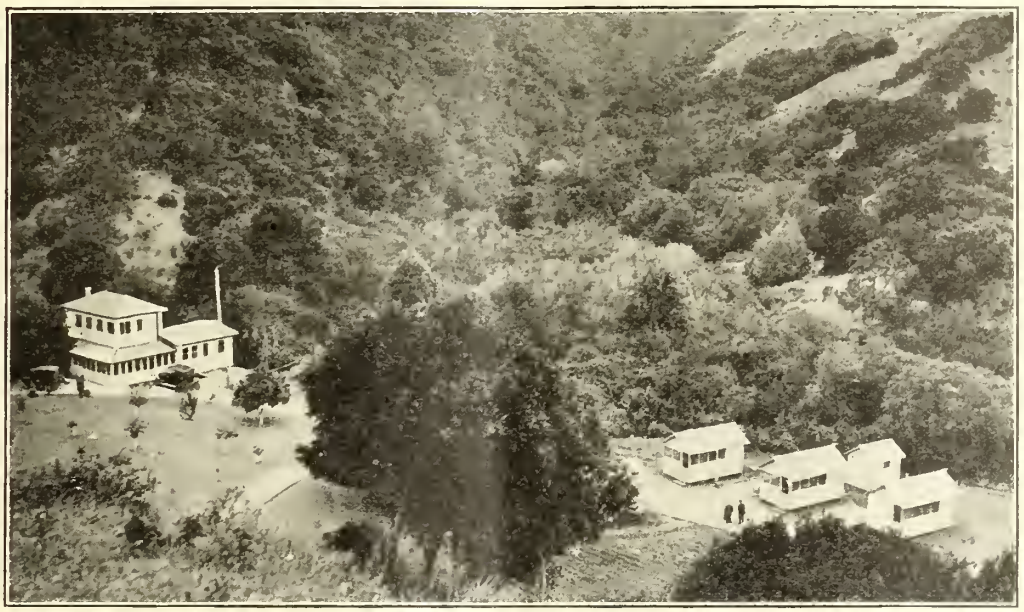

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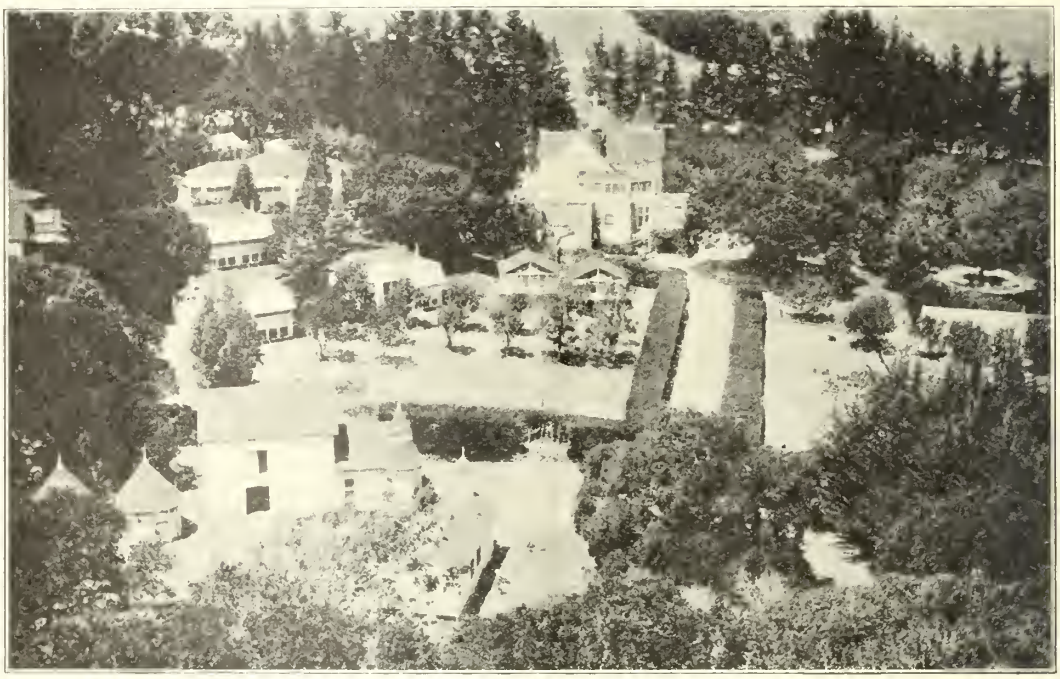

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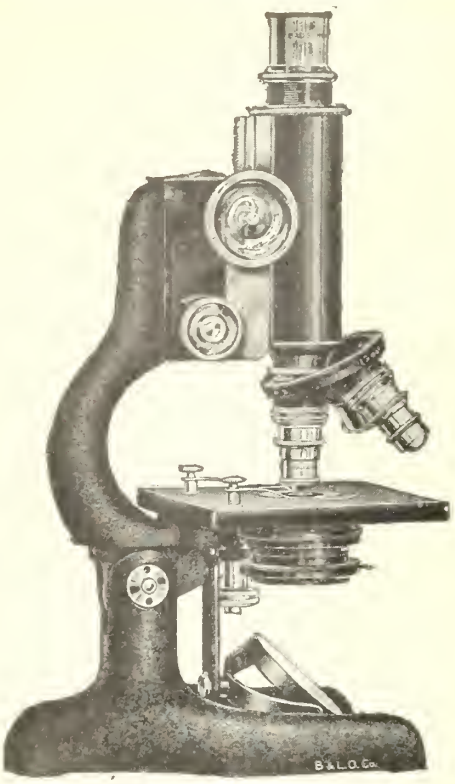

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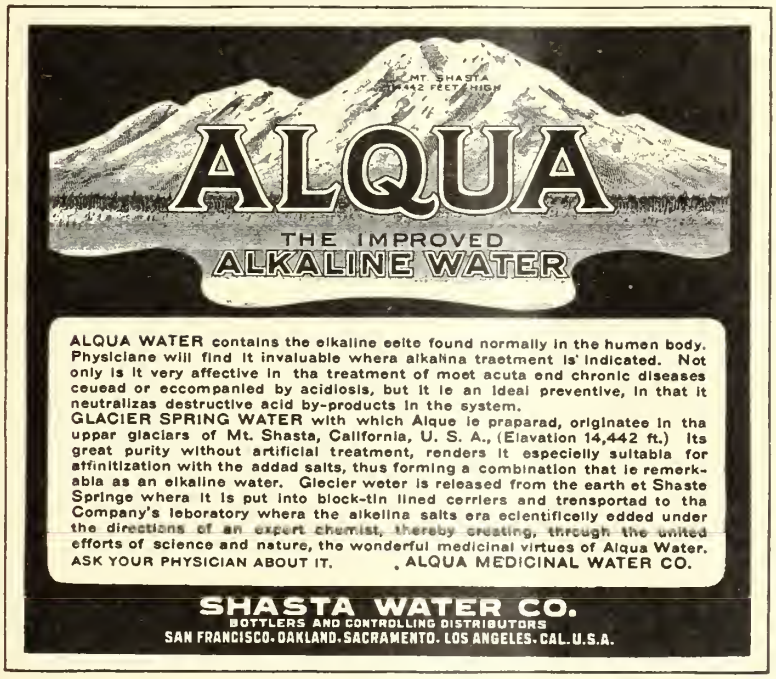

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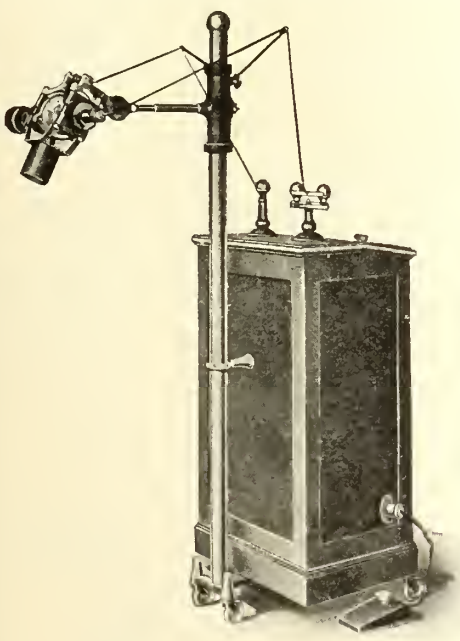

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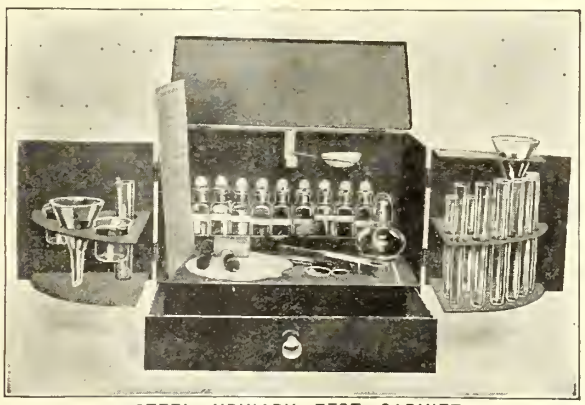

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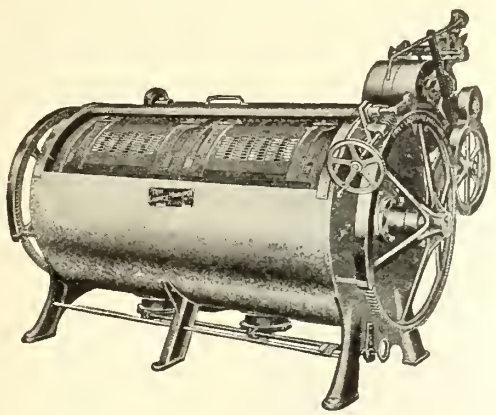

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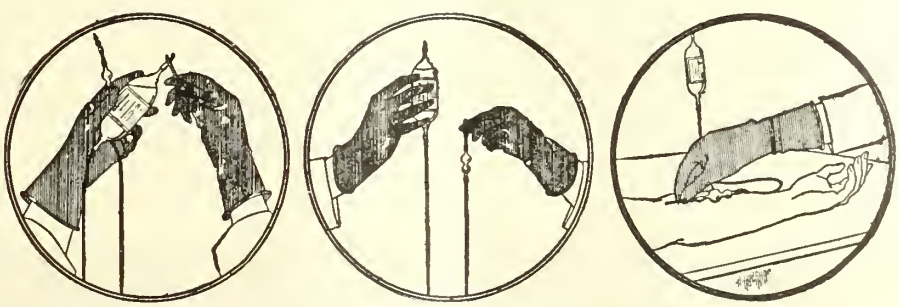

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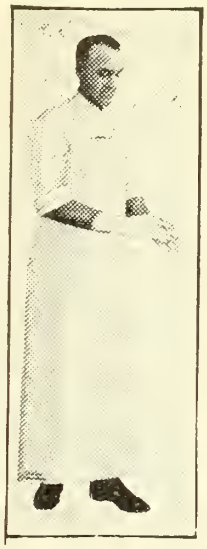

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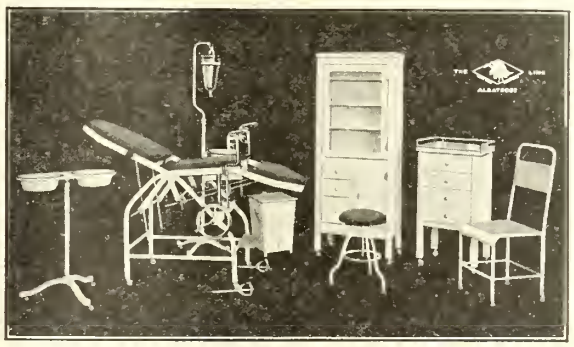

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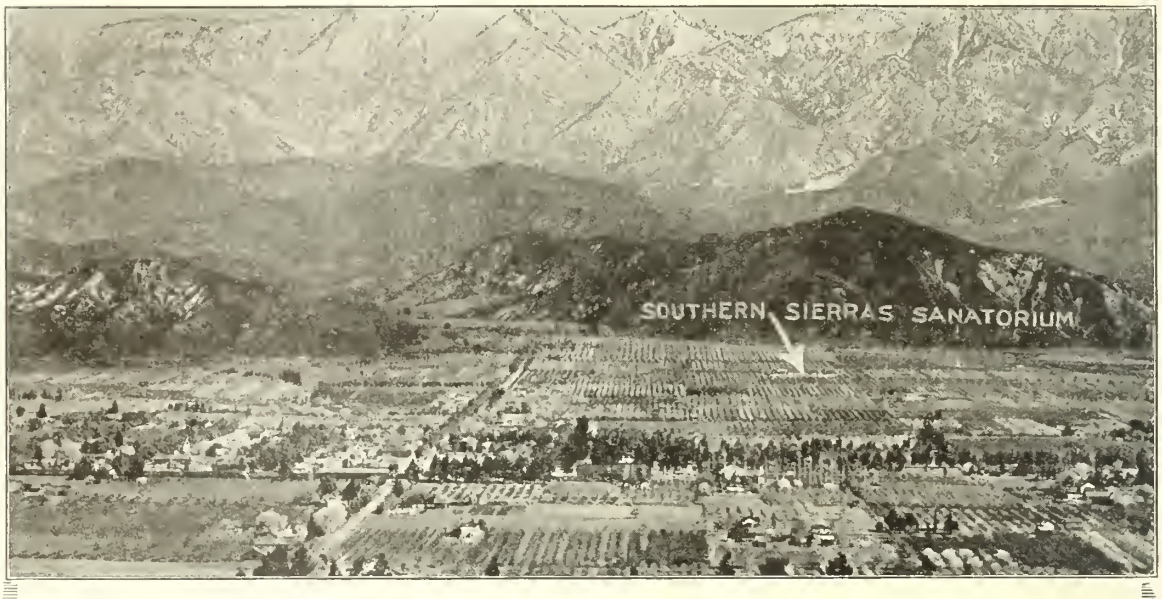

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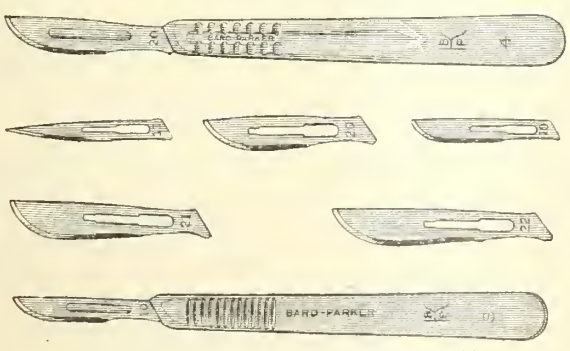

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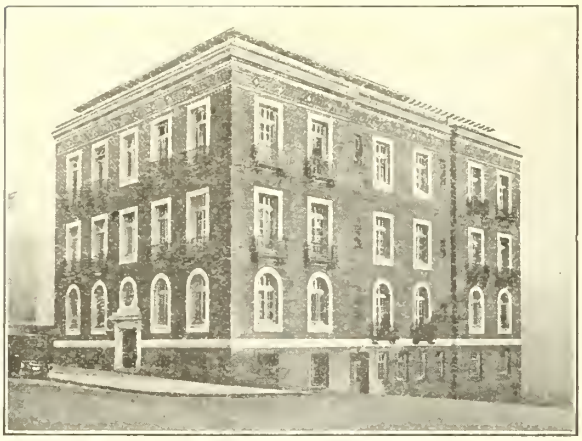

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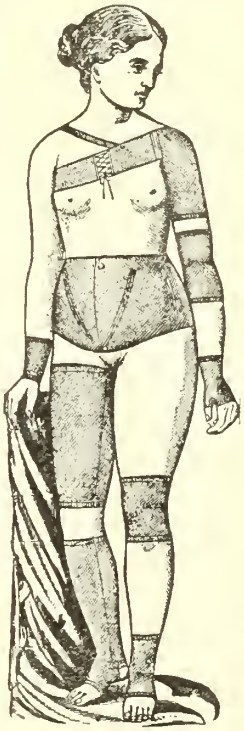

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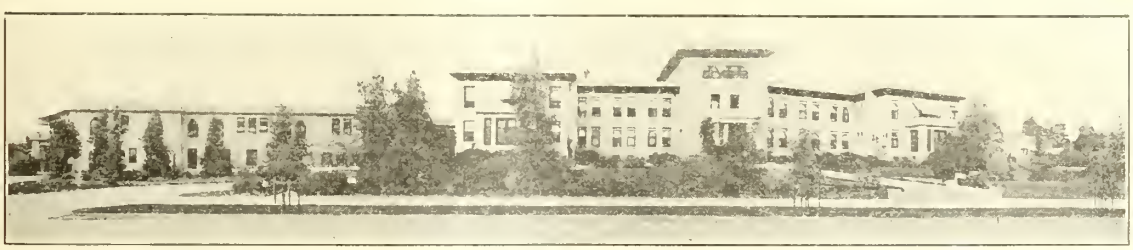

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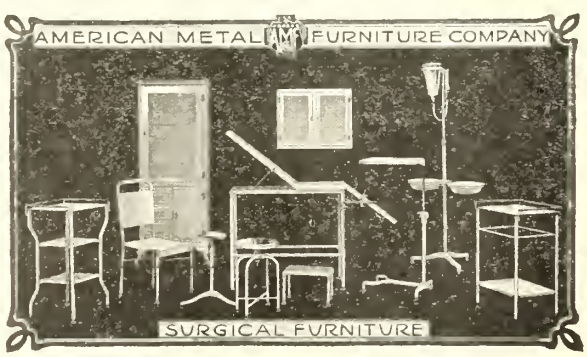

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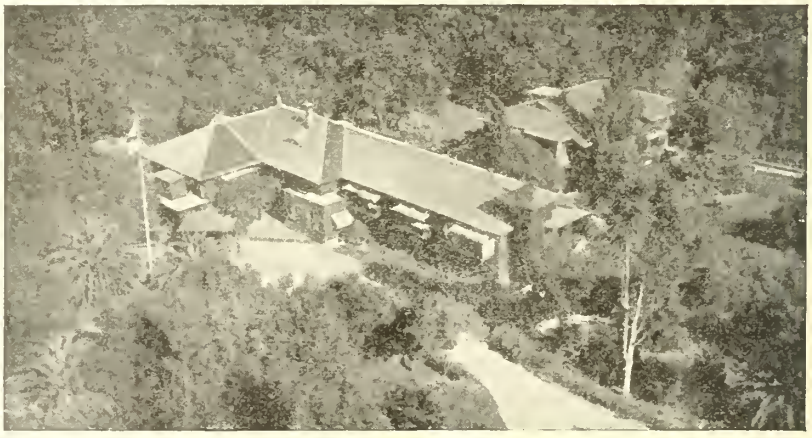

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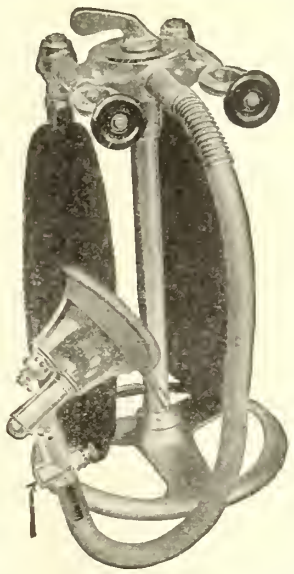

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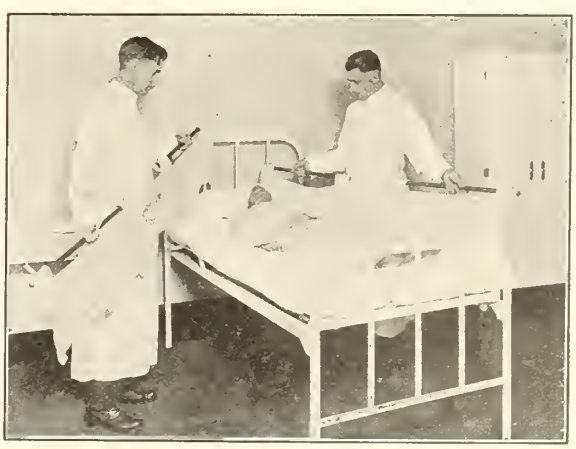

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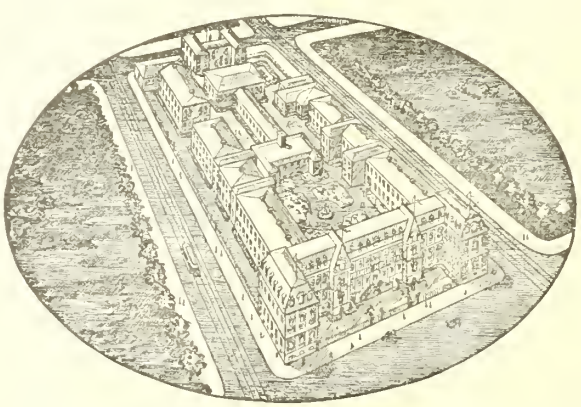

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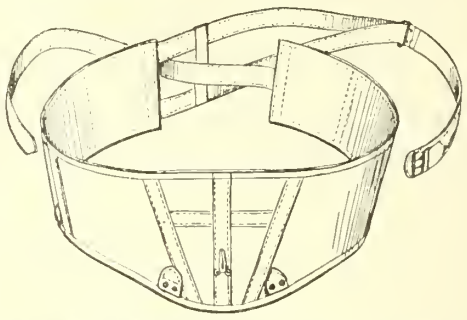

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Counties.	President.	Secretary.	Meets.
Alameda County Medical Association	E. E. Brinkerhoff, Oakland	C. L. McVey, Oakland	3rd Monday, Oakland Hotel, Oakland.
Butte County Medical Society	P. F. Bullington	J. O. Chiapella, Chico	2d Thursday
Contra Costa County Medical Society	M. L. Fernandez, Pinole	L. St. John Hely, Richmond	Last Wednesday night.
Fresno County Medical Society	G. W. Walker, Fresno	Thos. F. Madden, Fresno	1st Tuesday.
Glenn County Medical Society	T. H. Brown, Orland	Samuel Iglick, Orland	Bi-monthly.
Humboldt County Medical Society	J. C. Hadley, Arcata	L. A. Wing, Eureka	2d Tuesday.
Imperial County Medical Society	W. W. Apple, El Centro	H. W. Owen, El Centro	
Kern County Medical Society	E. S. Fogg, Wasco	Joe K. Smith, Bakersfield	3d Monday.
Lassen-Plumas County Medical Society	W. E. Dozier, Susanville	R. W. T. Garner, Susanville	
Los Angeles County Medical Society	Walter Brem, Los Angeles	Harlan Shoemaker Los Angeles	1st & 3d Thursday except July, Aug., Sept.
Marin County Medical Society	Arthur H. Mays, Sausalito	W. F. Jones, San Rafael	2d Thursday each month
Mendocino County Medical Society	Homer H. Wolfe, Albion	O. H. Beckman, Fort Bragg	Monthly.
Merced County Medical Society	E. R. Fountain, Merced	Brett Davis, Merced	1st Thursday.
Monterey County Medical Society	Chas. T. Bullard, King City	T. C. Edwards, Salinas	1st Saturday.
Napa County Medical Society	Edward F. Donnelly, Napa	Otto T. Schulze, Napa	1st Tuesday.
Orange County Medical Association	J. H. Lang, Fullerton	W. C. Mayes, Santa Ana	1st Tuesday.
Placer County Medical Society	C. J. Durand, Colfax	R. A. Peers, Colfax	1st Saturday every 2d month.
Riverside County Medical Society	Paul E. Simonds, Riverside	T. A. Card, Riverside	2d Monday.
Sacramento Society for Medical Improvement	G. P. Dillon, Sacramento	George J. Hall, Sacramento	3d Tuesday.
San Benito County Medical Society	L. C. Hull, Hollister		1st Monday.
San Bernardino Medical Association	L. M. Coy, San Bernardino	E. J. Eytinge, Redlands	1st Tuesday.
San Diego County Medical Society	W. W. Crawford, San Diego	G. B. Worthington, San Diego	2d and 4th Tuesdays.
San Francisco County Medical Society	Saxton Pope, San Francisco	Le Roy H. Briggs, S. F.	Every Tuesday.
San Joaquin County Medical Society	L. R. Johnson, Stockton	Dewey R. Powell, Stockton	4th Friday, except July and August.
San Luis Obispo County Medical Society	B. Y. Miller, San Luis Obispo	G. L. Sobey, Paso Robles	1st Saturday of each month.
San Mateo County Medical Society	C. V. Thompson, Pescadero	F. S. Gregory, Redwood City	1st Friday of each month.
Santa Barbara County Medical Ass'n	Wm. J. Mellinger, Santa Barbara	Alex C. Soper, Jr., Santa Barbara	2d Monday.
Santa Clara County Medical Society	Raymond Wayland, San Jose	E. P. Cook, San Jose	1st & 3d Wednesdays.
Santa Cruz County Medical Society	H. G. Watters, Watsonville	A. N. Nittler, Santa Cruz	1st Monday.
Shasta County Medical Society	A. B. Gilliland, Cottonwood	C. A. Mueller, Redding	Meets quarterly.
Siskiyou County Medical Society	J. R. Jones, Yreka	Robt. H. Heaney, Yreka	Meets 1st Monday each quarter.
Solano County Medical Society	E. A. Peterson, Vallejo	A. V. Doran, Vallejo	3d Wednesday.
Sonoma County Medical Society	J. W. Shipley, Cloverdale	N. R. H. Juell, Santa Rosa	1st Friday.
Stanislaus County	J. W. Reed, Newman	E. F. Reamer, Modesto	2d Friday except July and August.
Tehama County Medical Society	F. J. Bailey, Red Bluff	F. H. Bly, Red Bluff	1st Tuesday.
Tulare County Medical Society	A. W. Preston, Visalia	E. R. Zumwalt, Tulare	
Tuolumne County Medical Society	E. H. Reid, Tuolumne	W. L. Hood, Sonora	
Ventura County Medical Society	W. R. Livingston, Oxnard	John G. Norman, Oxnard	Every two months.
Yolo County Society for Medical Improvement	W. E. Bates, Davis	Lela J. Beebe, Woodland	1st Tuesday, except July, Aug. and Sept.
Yuba-Sutter Counties Medical Society	Allen Gray, Marysville	A. L. Miller, Marysville	Meets every 2 months.

N. B.—Secretaries will please notify Journal office of any changes taking place in their respective counties.

DIRECTORY OF NATIONAL AND WESTERN MEDICAL AND HEALTH ORGANIZATIONS

Society	President	Secretary	Annual Meeting
American Medical Association	Hubert Work, Pueblo, Colo.	Alexander R. Craig, 535 N. Dearborn St., Chicago, Ill.	St. Louis, May 22, 1922
Arizona Medical Association	Albert L. Gustetter, Nogales	D. F. Harbridge, Goodrich Bldg., Phoenix	Prescott, 1922
California State Medical Society	John H. Graves, San Francisco	W. E. Musgrave, Butler Bldg., San Francisco	Yosemite Park, May 15-18, 1922
League for Conservation of Public Health	Dudley Smith, Oakland	Celestine J. Sullivan, Butler Bldg., San Francisco	Yosemite Park, May 15-18, 1922
Colorado State Medical Society	H. A. Smith, Delta	F. B. Stephenson, Metropolitan Bldg., Denver	
Idaho State Medical Society	H. W. Wilson, Twin Falls	E. E. Laubaugh, Overland Bldg., Boise	
Montana Medical Association	W. W. Andrus, Miles City	E. G. Balsam, Hart-Albin Bldg., Billings	Great Falls, July, 1922
Nevada State Medical Association	R. A. Bowdle, East Ely	Horace J. Brown, Goldfield	
New Mexico Medical Society	Chester Russell, Artesia	F. E. Tull, Albuquerque	
Oregon State Medical Association	Joseph A. Pettit, Portland	Raymond E. Watkins, Corbett Bldg., Portland	
Texas State Medical Association	T. J. Bennett, Austin	Holman Taylor, Texas State Bank Bldg., Ft. Worth	El Paso, May, 1922
Utah State Medical Association	R. R. Hampton, Salt Lake City	Wm. L. Rich, Boston Bldg., Salt Lake City	
Washington State Medical Assn	A. E. Burns, Seattle	C. H. Thomson, Cobb Bldg., Seattle	
Wyoming State Medical Society	E. A. Kell, Rawlins	Earl Whedon, Sheridan	
Calif. Assn. of Med. Soc. Workers	Louise Morrow, San Francisco	Edna J. Shirpser, 3700 California St., San Francisco	Yosemite Park, May 15-18, 1922
California Assn. of Physiotherapists	Hazel Furchgott, San Francisco	Florence Atkinson, 29 Mosswood Road, Berkeley	Yosemite Park, May 15-18, 1922
California Assn. of Radiographers	F. McCormack, San Francisco	Leonard Frank, Physicians Bldg., San Francisco	Yosemite Park, May 15-18, 1922
California State Board of Health	G. E. Ebright, San Francisco	Walter M. Dickie, Sacramento	
California Board Med. Examiners	P. T. Phillips, Santa Cruz	Chas. B. Pinkham, Flood Bldg., San Francisco	
Anesthetists, Northern Cal. Assn. of	Mary Botsford, San Francisco	Dorothy A. Wood, 1390 7th Ave., San Francisco	Yosemite, May 15, 1922
Anesthetists, Southern Cal. Assn. of	W. R Crane, Los Angeles	Eleanor Seymour, 308 Cons. Realty Bldg., Los Angeles	Yosemite, May 15, 1922
Anesthetists, Pacific Coast Assn. of	Geo. P. Waller, Los Angeles	Eleanor Seymour, 308 Cons. Realty Bldg., Los Angeles	Yosemite, May 15, 1922
Los Angeles Orthopedic Society		Alfred E. Gallant, Van Nuys Bldg., Los Angeles	
San Francisco Orthopedic Club	J. T. Watkins, San Francisco	H. H. Markel, Butler Bldg., San Francisco	
Pacific Coast Roentgen Ray Society	W. W. Watkins, Phoenix, Ariz.	Roy Payne, Portland, Ore.	Phoenix, Ariz., Dec. 1-3, 1921
Western Section of American Roentgen-Ray Society	Albert Soiland, Los Angeles	W. W. Watkins, Phoenix, Ariz.	With Pacific Coast Roentgen-Ray Soc., May or June, 1922
Western Surgical Association	Chas. D. Lockwood, Pasadena	Warren A. Dennis, St. Paul, Minn.	St. Louis, Dec. 9-10, 1921
Southern Calif. Medical Assn.	Wm. Duffield, Auditorium Bldg., Los Angeles	Egerton Crispin, Los Angeles	San Diego, April 7-8, 1922

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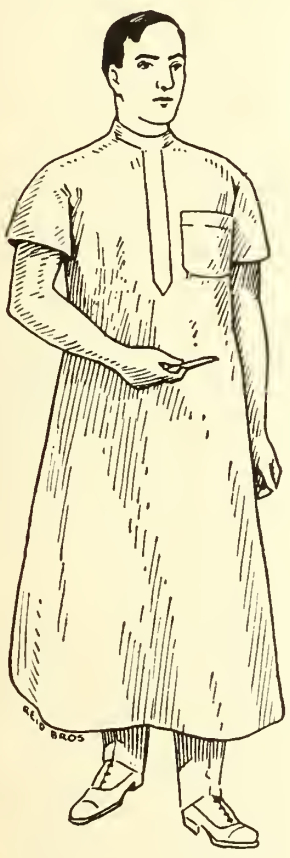

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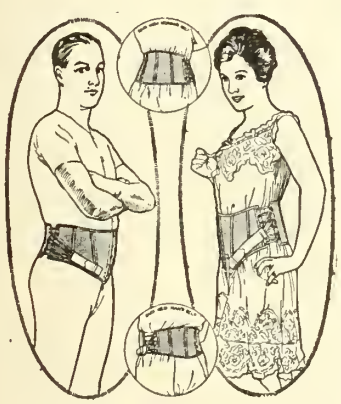

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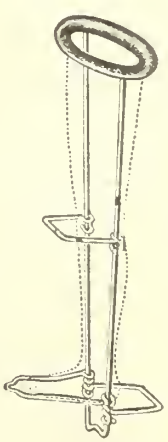

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ANNOUNCEMENT OF COURSES IN SURGERY

The San Francisco Polyclinic and Post-Graduate College has reorganized its teaching staff for the purpose of resuming post-graduate instruction that was interrupted by the World War. San Francisco, on account of its central location, its great hospitals and Universities, offers unrivaled facilities for graduates in medicine to obtain opportunities for post-graduate study. The first systematic course will be in Surgery and Allied Specialties, and will begin Monday, April 3, 1922, and continue for four weeks. Applicants must be graduates of a regular medical school and must have had previous surgical experience.

SYNOPSIS OF COURSE

OPERATIVE SURGERY—The surgical anatomy of each operation to be studied will be first carefully demonstrated. The operation will then be done by the student, first on the cadaver and then on the living dog. Twenty-four 2-hour periods will be allowed for this part of the course.

CLINICAL SURGERY—Four forenoons will be spent in the Surgical Amphitheatre and the operations performed will be carefully demonstrated to the students.

TONSIL SURGERY—Four 2-hour periods will be used in teaching this branch.

FRACTURES—Three 2½-hour periods will be used in the demonstration of the non-operative treatment of fractures by the methods evolved during the recent war. This will be supplemented by evening work on the technique of making and adjusting splints and casts.

ORTHOPEDICS—Four evening periods will be devoted to practical studies on the diagnosis and cure of the various conditions that produce backache, and on the anatomy and derangements of the knee, hip and shoulder joints.

UROLOGY—Four 1-hour demonstrations in the hospital and four 1-hour demonstrations in the clinic will be devoted to practical points in the diagnosis and treatment of genito-urinary diseases.

PROCTOLOGY—Four 1-hour periods will be given to the study of Proctoscopic diagnosis and treatment of rectal diseases.

ROENTGENOLOGY—Four 2-hour periods and two evening periods will be given to the study of X-Ray plates and radio-therapy.

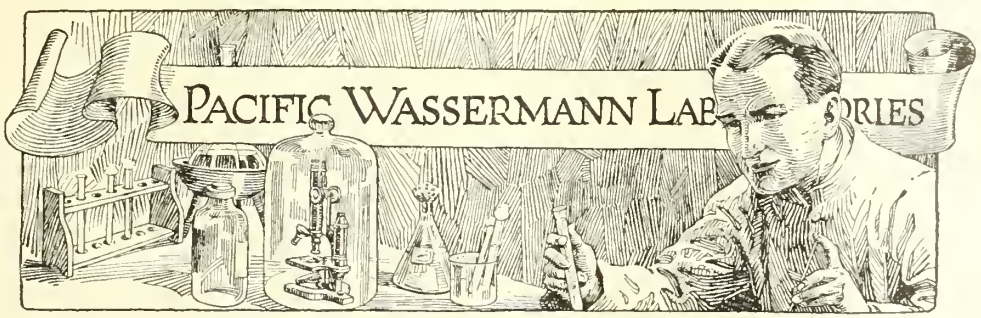
MISCELLANEOUS—A number of evening periods will be given to the discussion of practical points in pre- and post-operative treatment, obstetrics, gynecology, plastic, reconstructive and industrial surgery, and the relationship of physiology to surgery.

SCHEDULE

	8 to 9	9 to 10	10 to 11	11 to 12	1 to 2	2 to 3	3 to 4	8
Mon.	Operations on Dogs, Dr. Ryfkogel 8:30 to 11			Proctology, Dr. A. J. Zobel	Surgical Clinics			Splints Technique, Dr. Bunnell Goitre, Gastric Ulcer, Dr. Ryfkogel
Tue.	Neurology, Dr. Freyermuth	Tonsil Surgery, Dr. Pietrafesa		Urology, Dr. Stevens	Surgical Anatomy, Cadaver Surgery, Drs. Remmell, Callison and Casper			Physiology, Dr. Power Gynecology, Dr. Herzog
Wed.	Operations on Dogs, Dr. Bunnell 8:30 to 11			Industrial Surgery, Dr. Harbaugh		Radium-therapy Radio-therapy, Dr. Rodenbaugh		Backache, Anatomy and Derangement of Joints, Dr. Watkins
Thur.	Clinical Surgery Dr. Ryfkogel				Surgical Anatomy, Cadaver Surgery, Drs. Remmell, Callison and Casper			Plastic and Reconstructive Surgery, Dr. Pierce Obstetrics, Dr. Martin
Fri.	Operations on Dogs, Dr. S. N. Jacobs 8:30 to 11				Surgical Clinics			Roentgenology, Dr. Crowe Post-operative Treatment, Dr. Jacobs
Sat.	Fractures, Drs. Pierce and Bunnell 8:30 to 11			Urology, Dr. Hartman	Surgical Anatomy, Cadaver Surgery, Drs. Remmell, Callison and Casper			

The instruction in these courses will be practical in character, and is not intended to develop specialists but to add to the practical knowledge of those medical practitioners who are already doing their own surgery. The number of students will be limited to four, and the fee per student will be $250. For further information and enrollment blanks, apply to

H. A. L. RYFKOGEL, M. D., 516 Sutter Street, San Francisco



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The fundamental principle upon which this institution is founded is the maintenance of the highest standard of clinical laboratory service and efficiency. Accuracy is our watchword and no effort is ever spared to insure this. It is also our constant endeavor to uphold the highest ideals of ethical laboratory practice.

We contend that the clinical laboratory is a distinct and integral part of the physician's armamentarium and that the relation of laboratory practice to the general practice of medicine is as definite as the relation between the various specialties.

It is our conviction from years of practical experience that the highest efficiency in clinical laboratory specialization is attained by strictly confining the efforts and activity of the laboratory and its corps of trained specialists solely to laboratory work, removing the staff entirely from the field of medical treatment and practice. It is our very sincere belief that, in justice to the active medical practitioner and for the attainment of the greatest degree of efficiency in clinical laboratory specialization, the practice of medicine and laboratory practice as a specialty should be kept distinct and not combined.

Our staff is made up of experienced men with degrees in medicine and the sciences. Medical men of wide experience and training direct the pathological and medical work of these laboratories and the profession is invited to consult with them regarding the interpretation of laboratory findings. Our laboratory service is offered to the profession only. We do not invite specimens from the public.

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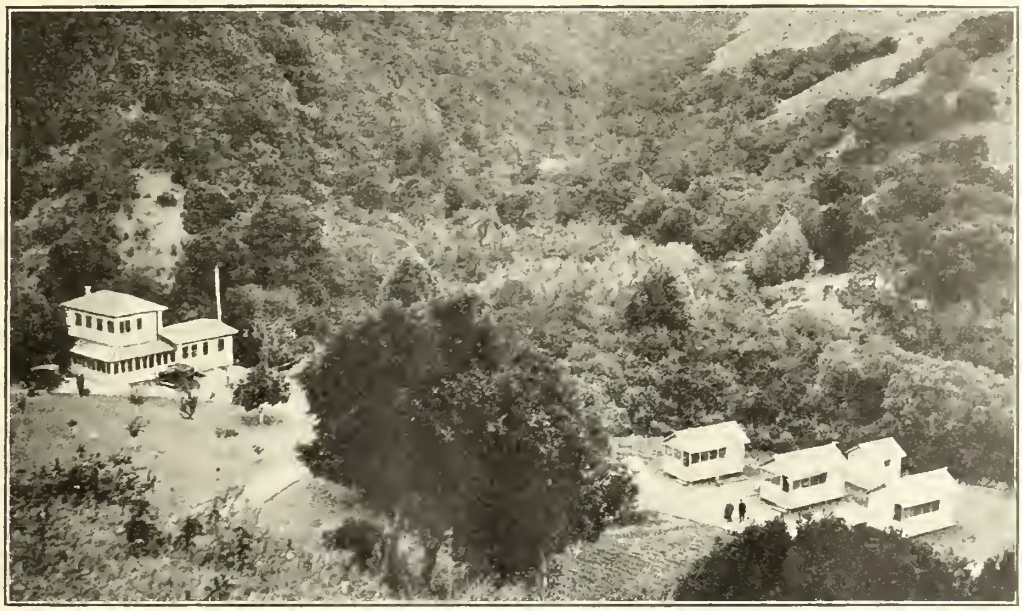

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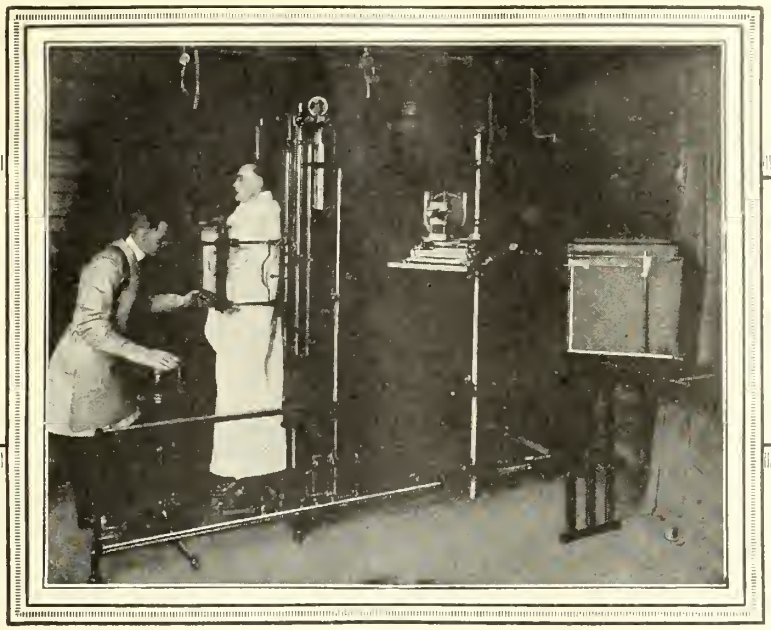

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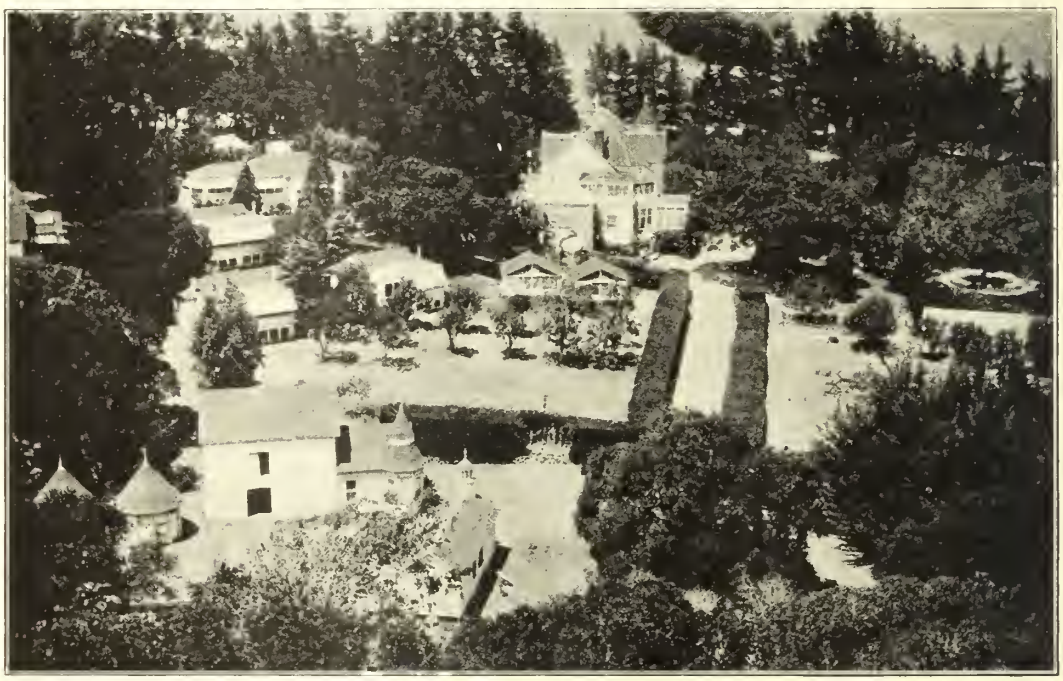

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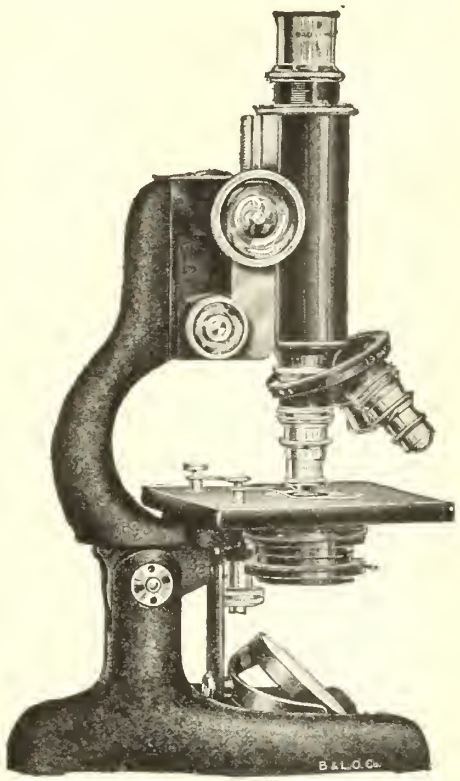

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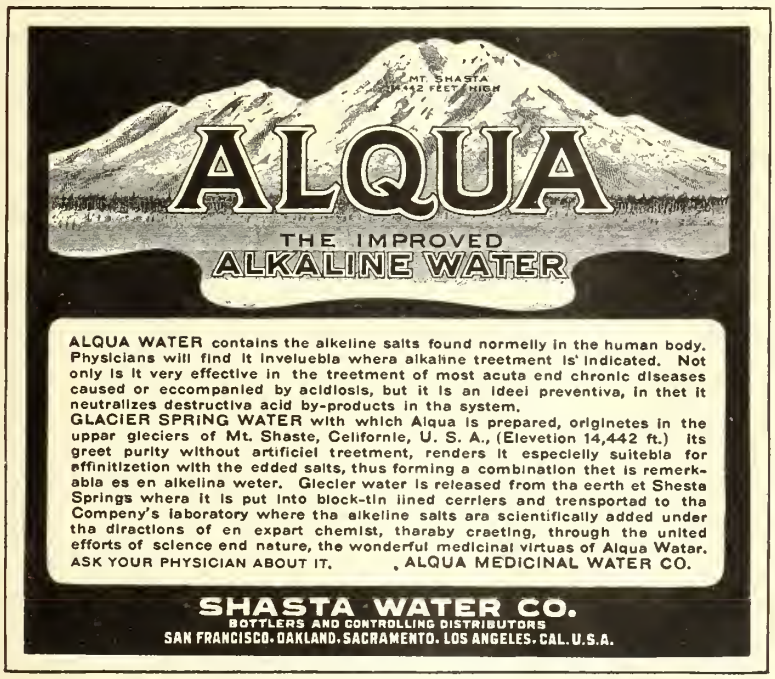

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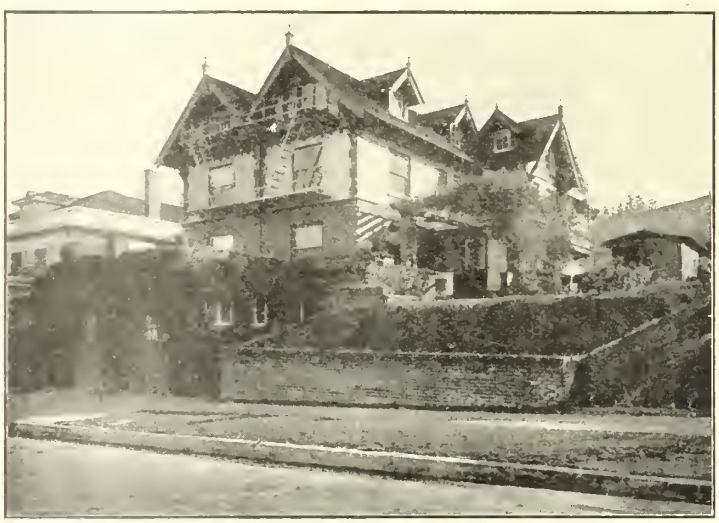

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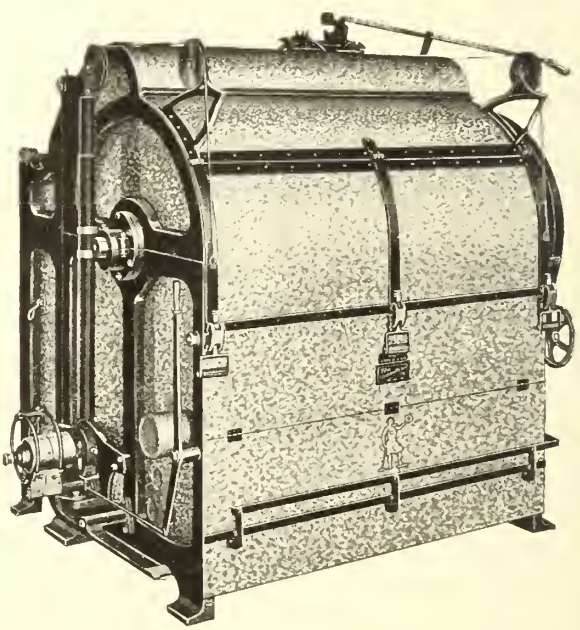

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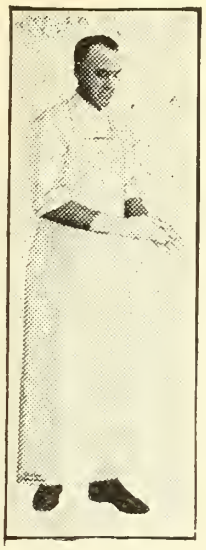

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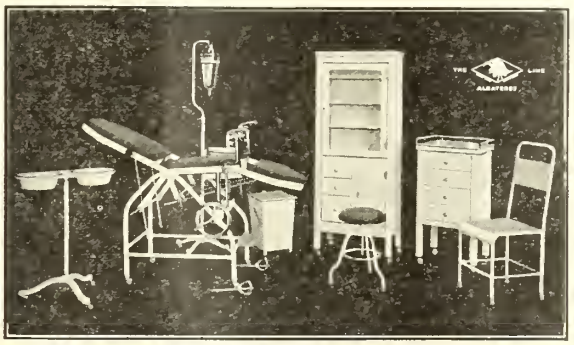

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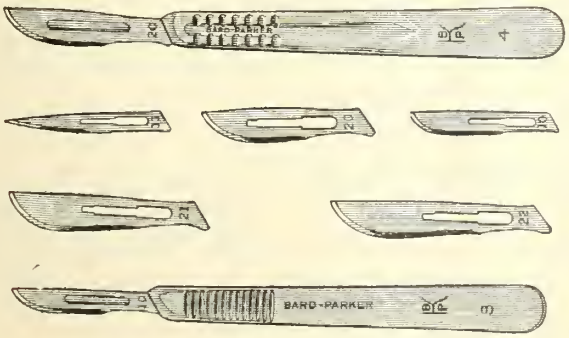

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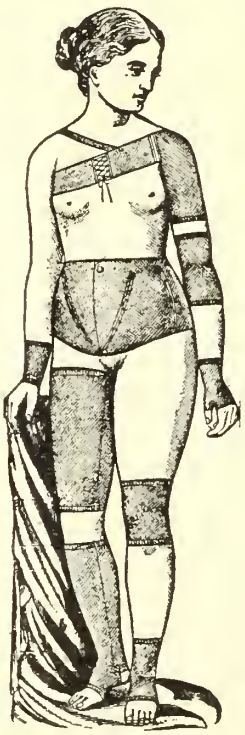

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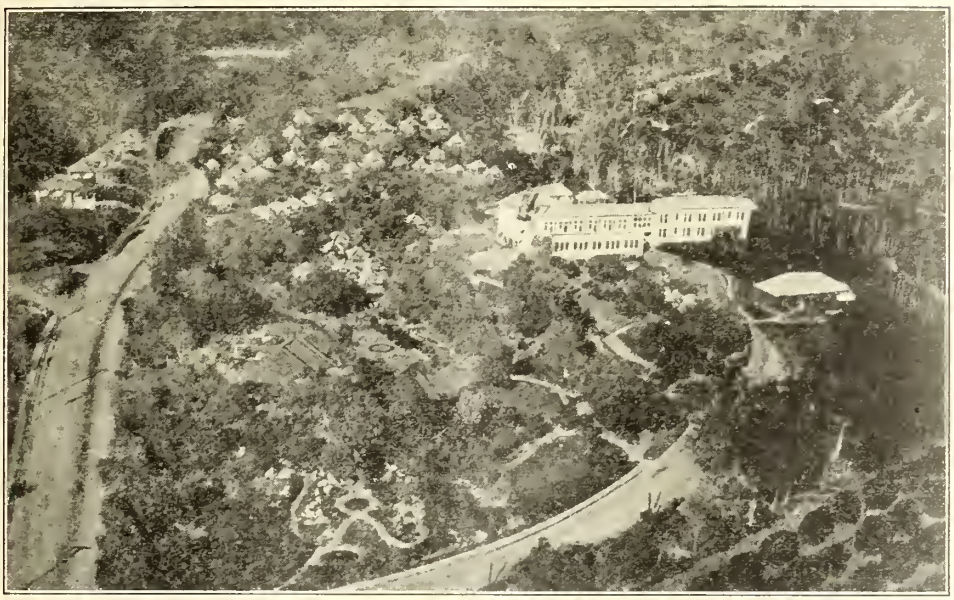

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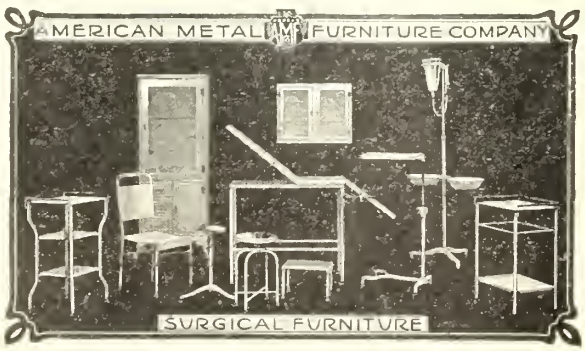

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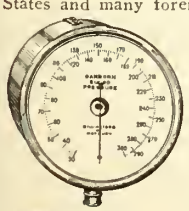

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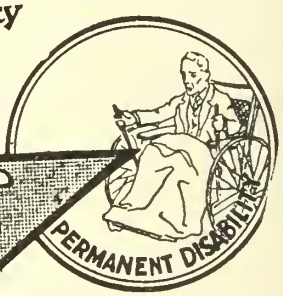

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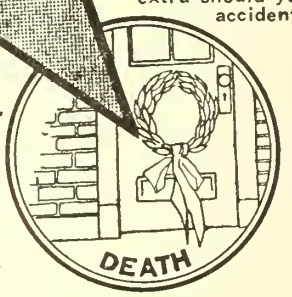

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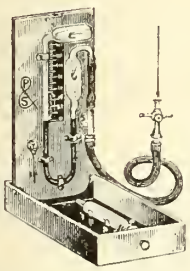

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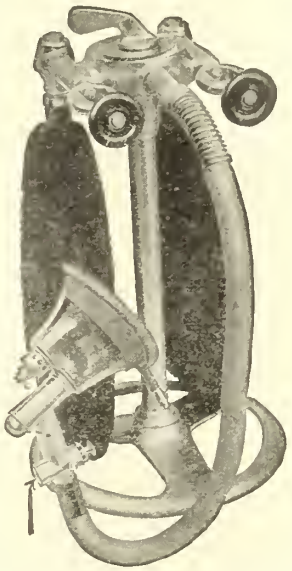

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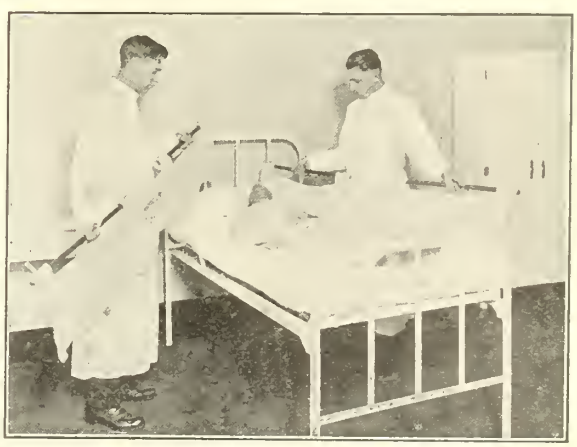

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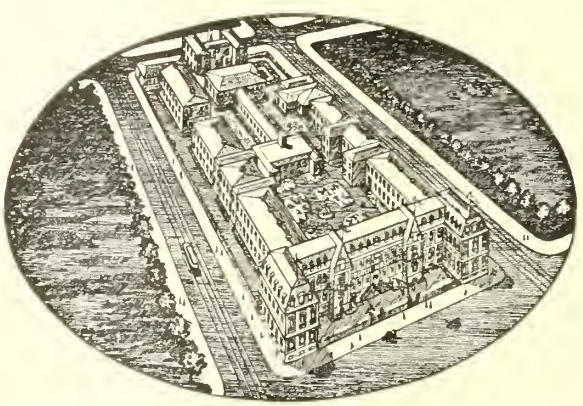

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DECEMBER 31st, 1921

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Deposits	68,201,299.62
Capital Actually Paid Up	1,000,000.00
Reserve and Contingent Funds	2,650,000.00
Employees' Pension Fund	371,753.46

A Dividend of FOUR AND ONE-QUARTER (4¼) per cent per annum was declared for the six months ending December 31, 1921.

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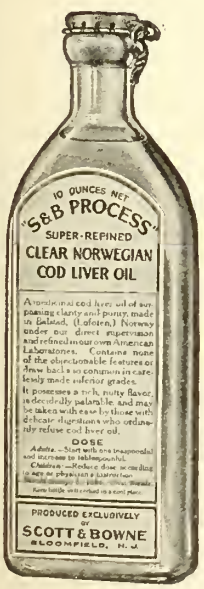

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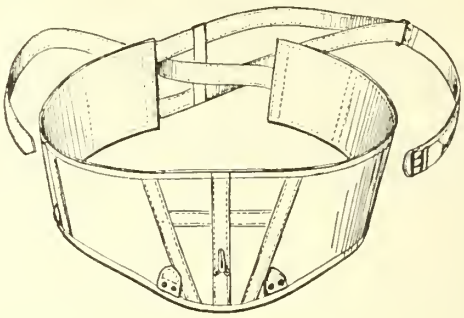

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It is the purpose of the Journal to develop on this page a list of advertisers who wish to insert classified advertisements. The same censorship will be applied to these advertisements as is now used in the reading columns and other advertising columns of the Journal. The space will be limited to five lines and advertisements will all be uniform in size and type. Suitable headings or classifications will be arranged as required. No advertisements will be accepted for less than six months, and the rates are $2.00 per issue.

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MISS CHARLOTTE H. BALLARD; 212 Medical Bldg.; Prospect 4100; Hours 4 to 6 p. m.

MISS ELSA DE GILLE; 2242 Polk St.; Sutter 3484; 7 to 9 p. m.

MISS HAZEL RUTH; 1264 Second Ave.; Sunset 3145; 6 to 8 p. m.

MISS ELIZABETH HENDERSON; 780 Post St.; Prospect 5809.

MISS HELEN PERRINE; 780 Post St.; Prospect 5809.

MISS HILDA RODWAY; 177 Post St.; Kearny 4229; by appointment.

MISS MARGARET STEVENSON; 177 Post St.; Kearny 4229; by appointment.

MISS GRETA WEDIN; 2242 Polk St.; Prospect 2444; after 4 p. m.

Oakland

MISS FLORENCE E. ATKINSON; 520 Central Bank Bldg.; Oakland 50; by appointment.

MISS FLORENCE C. BURRELL; 520 Central Bank Bldg.; Oakland 50; by appointment.

MISS FLORENCE E. THORNTON; 832 E. 21st St.; Merritt 5190; 9 to 5

VOLZ, CHAS. R.; 802 First Natl. Bank Bldg.; Oakland 4635; by appointment.

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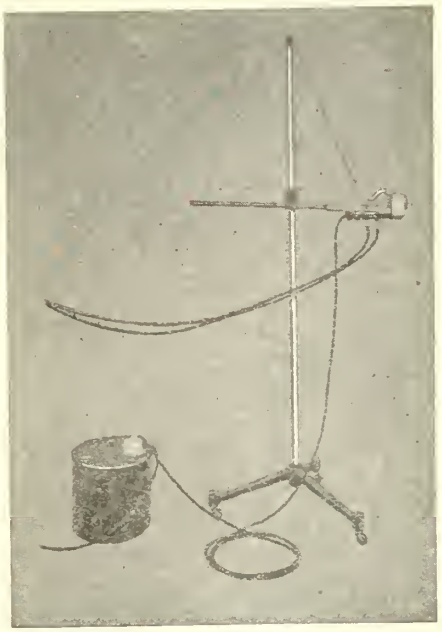

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LIST OF PRESIDENTS AND SECRETARIES OF COUNTY MEDICAL SOCIETIES

Counties.	President.	Secretary.	Meets.
Alameda County Medical Association	E. E. Brinkerhoff, Oakland	C. L. McVey, Oakland	3rd Monday, Oakland Hotel, Oakland.
Butte County Medical Society	P. F. Bullington	J. O. Chiapella, Chico	2d Thursday
Contra Costa County Medical Society	M. L. Fernandez, Pinole	L. St. John Hely, Richmond	Last Wednesday night.
Fresno County Medical Society	G. W. Walker, Fresno	Thos. F. Madden, Fresno	1st Tuesday.
Glenn County Medical Society	T. H. Brown, Orland	Samuel Iglick, Orland	Bi-monthly.
Humboldt County Medical Society	J. C. Hadley, Arcata	L. A. Wing, Eureka	2d Tuesday.
Imperial County Medical Society	W. W. Apple, El Centro	Frances P. Elliott, El Centro	
Kern County Medical Society	E. S. Fogg, Wasco	Joe K. Smith, Bakersfield	3d Monday.
Lassen-Plumas County Medical Society	W. E. Dozier, Susanville	R. W. T. Garner, Susanville	
Los Angeles County Medical Society	Walter Brem, Los Angeles	Harlan Shoemaker Los Angeles	1st & 3d Thursday except July, Aug., Sept.
Marin County Medical Society	J. H. Kuser, San Anselmo	C. A. De Lancey, San Quentin	2d Thursday each month
Mendocino County Medical Society	Lew K. Van Allen, Ukiah	Paul J. Bowman, Fort Bragg	Monthly.
Merced County Medical Society	E. R. Fountain, Merced	Brett Davis, Merced	1st Thursday.
Monterey County Medical Society	Chas. T. Bullard, King City	T. C. Edwards, Salinas	1st Saturday.
Napa County Medical Society	Edward F. Donnelly, Napa	Otto T. Schulze, Napa	1st Tuesday.
Orange County Medical Association	J. H. Lang, Fullerton	W. C. Mayes, Santa Ana	1st Tuesday.
Placer County Medical Society	C. J. Durand, Colfax	R. A. Peers, Colfax	1st Saturday every 2d month.
Riverside County Medical Society	Paul E. Simonds, Riverside	T. A. Card, Riverside	2d Monday.
Sacramento Society for Medical Improvement	G. P. Dillon, Sacramento	George J. Hall, Sacramento	3d Tuesday.
San Benito County Medical Society	L. C. Hull, Hollister		1st Monday.
San Bernardino Medical Association	L. M. Coy, San Bernardino	E. J. Eytinge, Redlands	1st Tuesday.
San Diego County Medical Society	W. W. Crawford, San Diego	G. B. Worthington, San Diego	2d and 4th Tuesdays.
San Francisco County Medical Society	Saxton Pope, San Francisco	Le Roy H. Briggs, S. F.	Every Tuesday.
San Joaquin County Medical Society	L. R. Johnson, Stockton	Dewey R. Powell, Stockton	4th Friday, except July and August.
San Luis Obispo County Medical Society	B. Y. Miller, San Luis Obispo	G. L. Sobey, Paso Robles	1st Saturday of each month.
San Mateo County Medical Society	C. V. Thompson, Pescadero	F. S. Gregory, Redwood City	1st Friday of each month.
Santa Barbara County Medical Ass'n	Wm. J. Mellinger, Santa Barbara	Alex C. Soper, Jr., Santa Barbara	2d Monday.
Santa Clara County Medical Society	Raymond Wayland, San Jose	E. P. Cook, San Jose	1st & 3d Wednesdays.
Santa Cruz County Medical Society	H. G. Watters, Watsonville	A. N. Nittler, Santa Cruz	1st Monday.
Shasta County Medical Society	A. B. Gilliland, Cottonwood	C. A. Mueller, Redding	Meets quarterly.
Siskiyou County Medical Society	J. R. Jones, Yreka	Robt. H. Heaney, Yreka	Meets 1st Monday each quarter.
Solano County Medical Society	E. B. Todd, Vallejo	A. V. Doran, Vallejo	3d Wednesday.
Sonoma County Medical Society	J. W. Shipley, Cloverdale	N. R. H. Juell, Santa Rosa	1st Friday.
Stanislaus County	J. W. Reed, Newman	E. F. Reamer, Modesto	2d Friday except July and August.
Tehama County Medical Society	F. J. Bailey, Red Bluff	F. H. Bly, Red Bluff	1st Tuesday.
Tulare County Medical Society	A. W. Preston, Visalia	E. R. Zumwalt, Tulare	
Tuolumne County Medical Society	E. H. Reid, Tuolumne	W. L. Hood, Sonora	
Ventura County Medical Society	W. R. Livingston, Oxnard	John G. Norman, Oxnard	Every two months.
Yolo County Society for Medical Improvement	W. E. Bates, Davis	Lela J. Beebe, Woodland	1st Tuesday, except July, Aug. and Sept.
Yuba-Sutter Counties Medical Society	Allen Gray, Marysville	A. L. Miller, Marysville	Meets every 2 months.

N. B.—Secretaries will please notify Journal office of any changes taking place in their respective counties.

DIRECTORY OF NATIONAL AND WESTERN MEDICAL AND HEALTH ORGANIZATIONS

Society	President	Secretary	Annual Meeting
American Medical Association	Hubert Work, Pueblo, Colo.	Alexander R. Craig, 535 N. Dearborn St., Chicago, Ill.	St. Louis, May 22, 1922
Arizona Medical Association	Albert L. Gustetter, Nogales	D. F. Harbridge, Goodrich Bldg., Phoenix	Prescott, 1922
California State Medical Society	John H. Graves, San Francisco	W. E. Musgrave, Butler Bldg., San Francisco	Yosemite Park, May 15-18, 1922
League for Conservation of Public Health	Dudley Smith, Oakland	Celestine J. Sullivan, Butler Bldg., San Francisco	Yosemite Park, May 15-18, 1922
Colorado State Medical Society	H. A. Smith, Delta	F. B. Stephenson, Metropolitan Bldg., Denver	
Idaho State Medical Society	H. W. Wilson, Twin Falls	E. E. Laubaugh, Overland Bldg., Boise	
Montana Medical Association	W. W. Andrus, Miles City	E. G. Balsam, Hart-Albin Bldg., Billings	Great Falls, July, 1922
Nevada State Medical Association	R. A. Bowdle, East Ely	Horace J. Brown, Goldfield	
New Mexico Medical Society	Chester Russell, Artesia	F. E. Tull, Albuquerque	
Oregon State Medical Association	Joseph A. Pettit, Portland	Raymond E. Watkins, Corbett Bldg., Portland	
Texas State Medical Association	T. J. Bennett, Austin	Holman Taylor, Texas State Bank Bldg., Ft. Worth	El Paso, May, 1922
Utah State Medical Association	R. R. Hampton, Salt Lake City	Wm. L. Rich, Boston Bldg., Salt Lake City	
Washington State Medical Assn	A. E. Burns, Seattle	C. H. Thomson, Cobb Bldg., Seattle	
Wyoming State Medical Society	E. A. Kell, Rawlins	Earl Whedon, Sheridan	
Calif. Assn. of Med. Soc. Workers	Louise Morrow, San Francisco	Edna J. Shirpser, 3700 California St., San Francisco	Yosemite Park, May 15-18, 1922
California Assn. of Physiotherapists	Hazel Furchgott, San Francisco	Florence Atkinson, 29 Mosswood Road, Berkeley	Yosemite Park, May 15-18, 1922
California Assn. of Radiographers	F. McCormack, San Francisco	Leonard Frank, Physicians Bldg., San Francisco	Yosemite Park, May 15-18, 1922
California State Board of Health	G. E. Ebright, San Francisco	Walter M. Dickie, Sacramento	
California Board Med. Examiners	P. T. Phillips, Santa Cruz	Chas. B. Pinkham, Flood Bldg., San Francisco	
Anesthetists, Northern Cal. Assn. of	Mary Botsford, San Francisco	Dorothy A. Wood, 1390 7th Ave., San Francisco	Yosemite, May 15, 1922
Anesthetists, Southern Cal. Assn. of	W. R. Crane, Los Angeles	Eleanor Seymour, 308 Cons. Realty Bldg., Los Angeles	Yosemite, May 15, 1922
Anesthetists, Pacific Coast Assn. of	Geo. P. Waller, Los Angeles	Eleanor Seymour, 308 Cons. Realty Bldg., Los Angeles	Yosemite, May 15, 1922
Los Angeles Orthopedic Society		Alfred E. Gallant, Van Nuys Bldg., Los Angeles	
San Francisco Orthopedic Club	J. T. Watkins, San Francisco	H. H. Markel, Butler Bldg., San Francisco	
Pacific Coast Roentgen Ray Society	W. W. Watkins, Phoenix, Ariz.	Roy Payne, Portland, Ore.	Phoenix, Ariz., Dec. 1-3, 1921
Western Section of American Roentgen-Ray Society	Albert Soiland, Los Angeles	W. W. Watkins, Phoenix, Ariz.	With Pacific Coast Roentgen-Ray Soc., May or June, 1922
Western Surgical Association	Chas. D. Lockwood, Pasadena	Warren A. Dennis, St. Paul, Minn.	St. Louis, Dec. 9-10, 1921
Southern Calif. Medical Assn.	Wm. Duffield, Auditorium Bldg., Los Angeles	Egerton Crispin, Los Angeles.	San Diego, April 7-8, 1922

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APRIL · 1922

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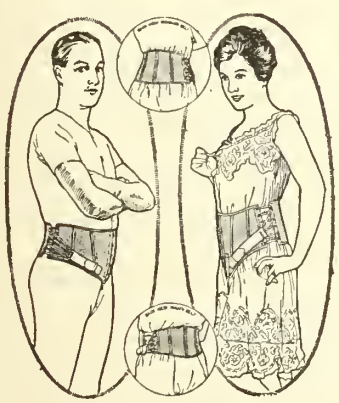

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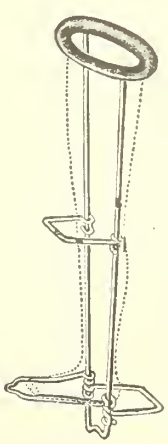

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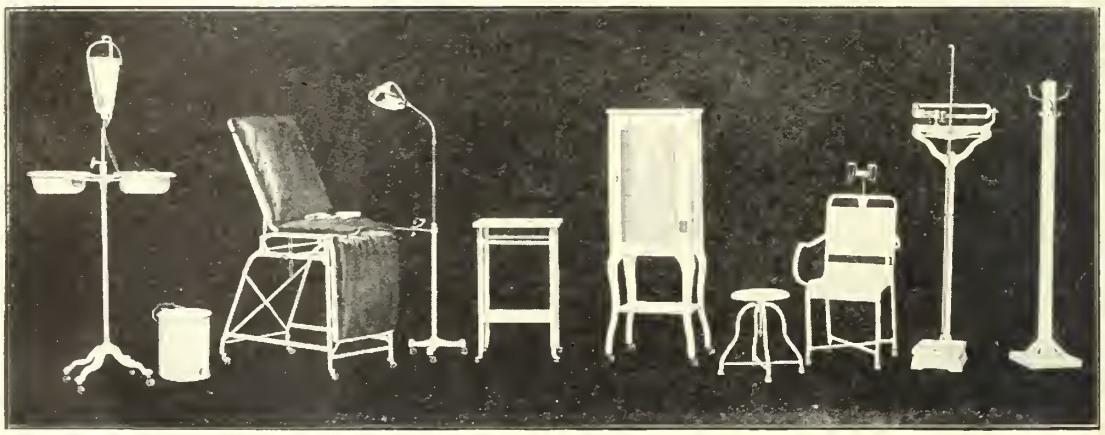

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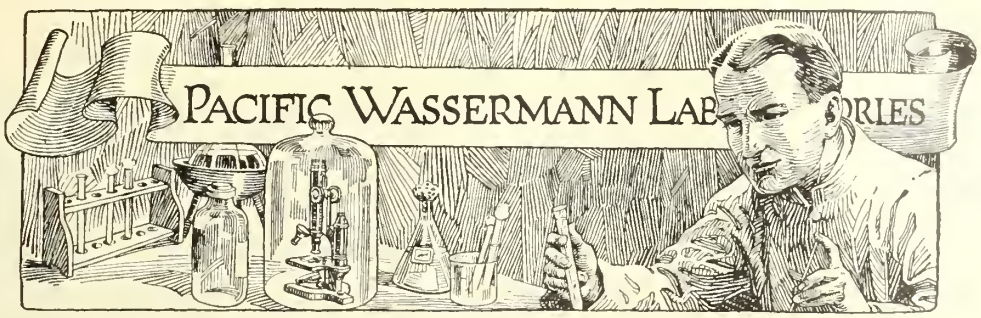

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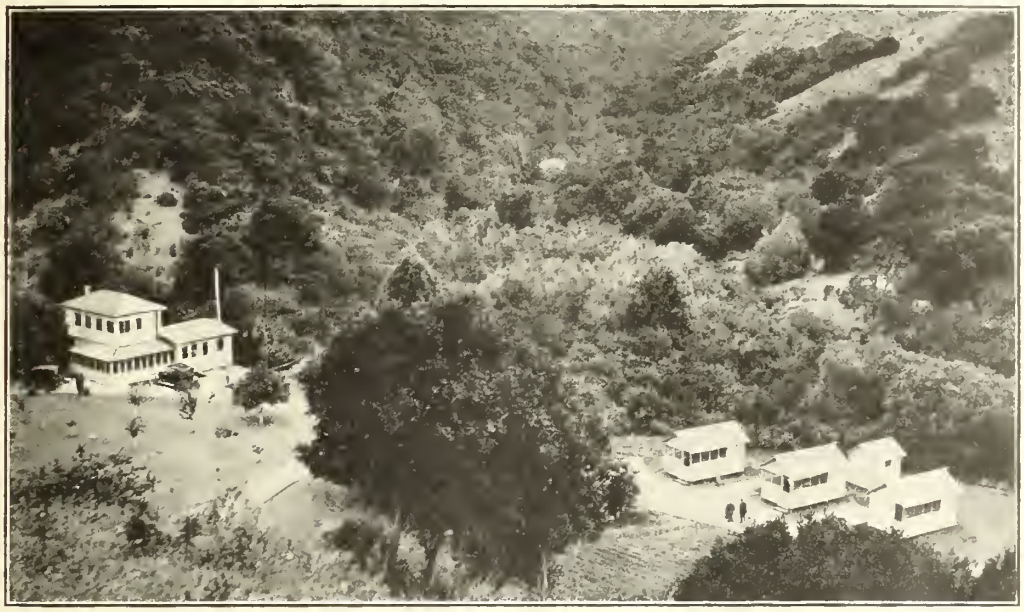

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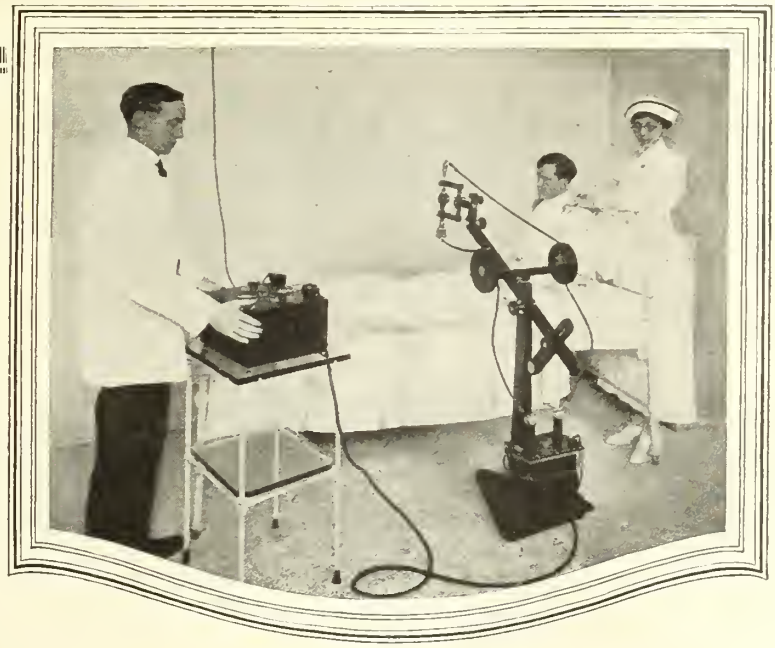

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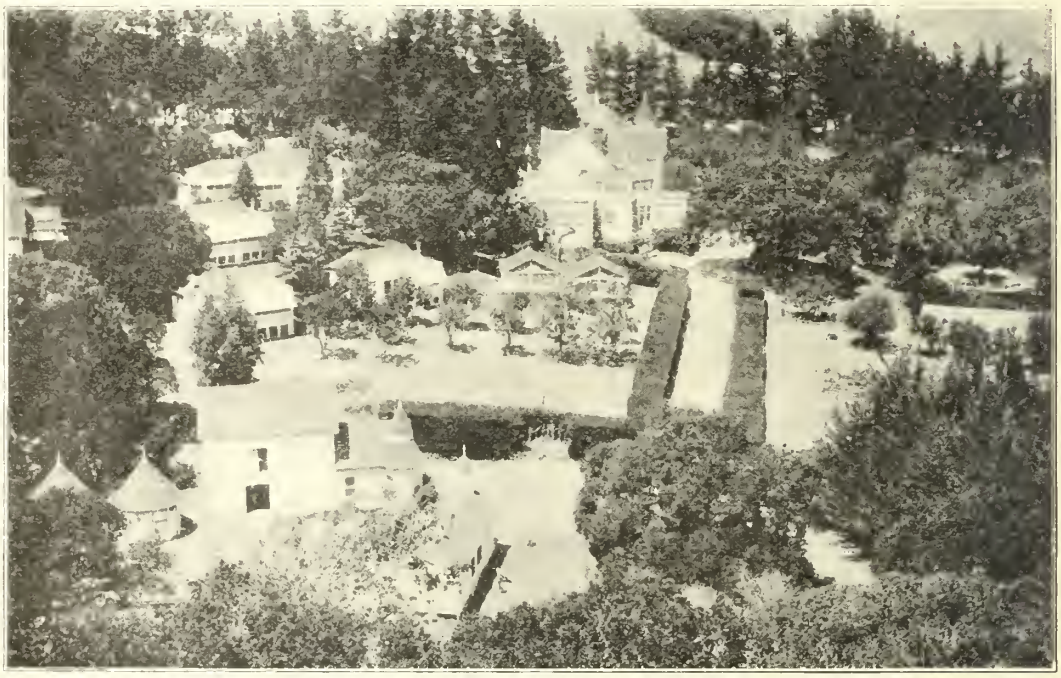

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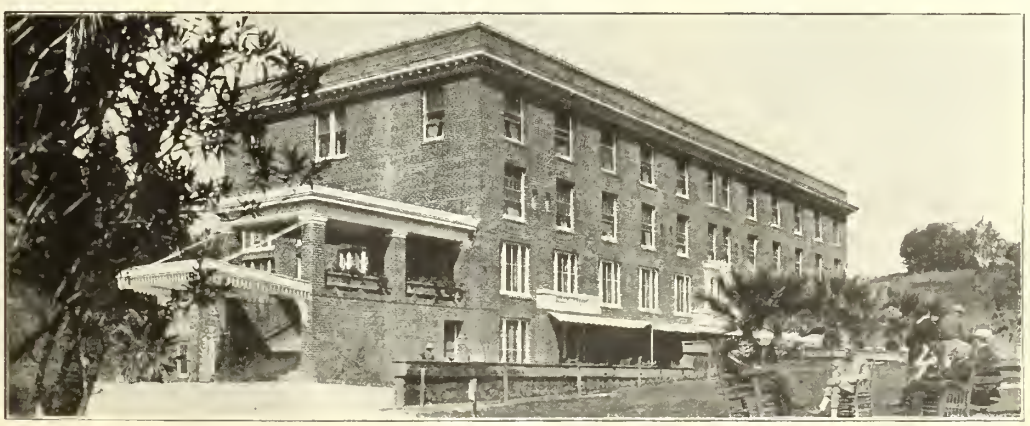

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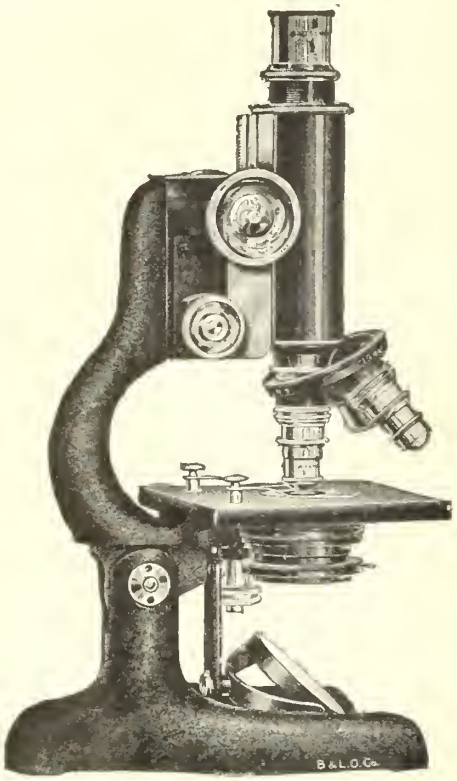

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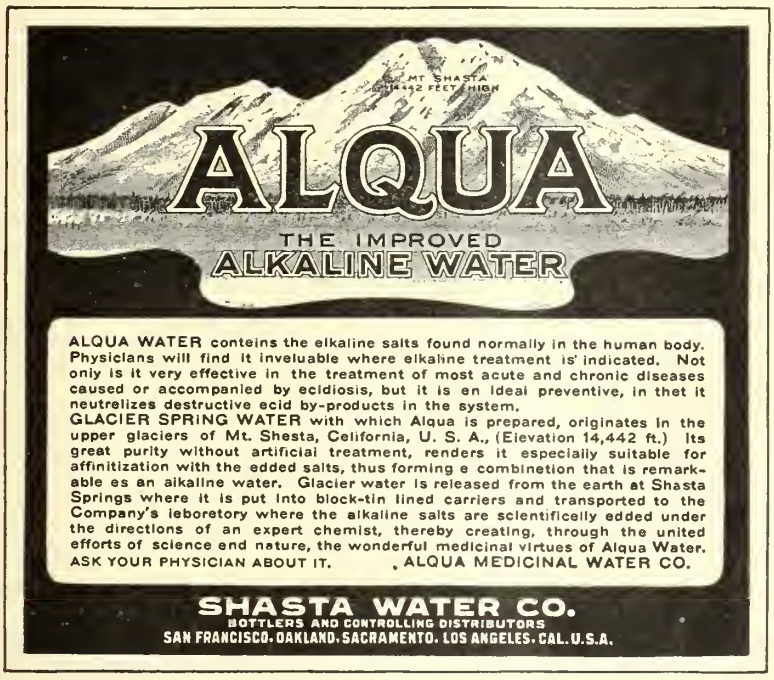

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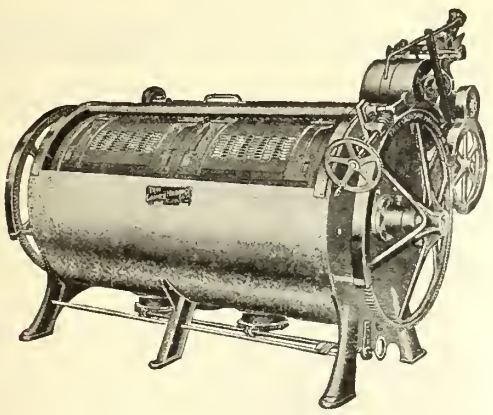

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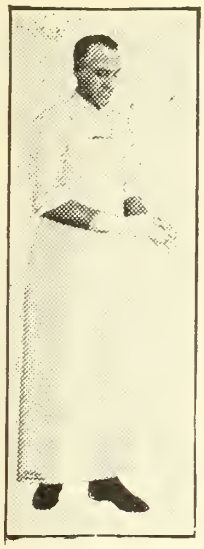

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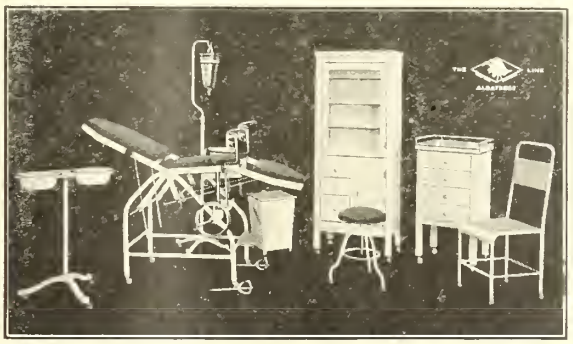

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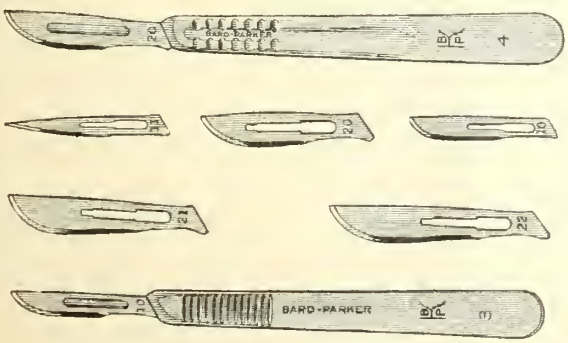

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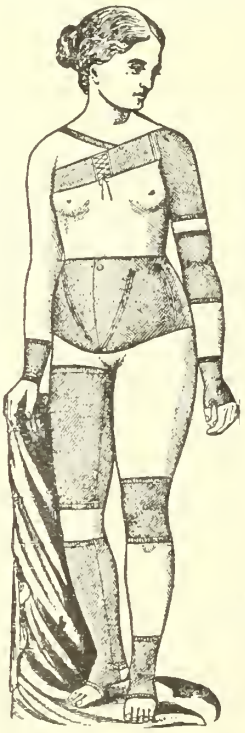

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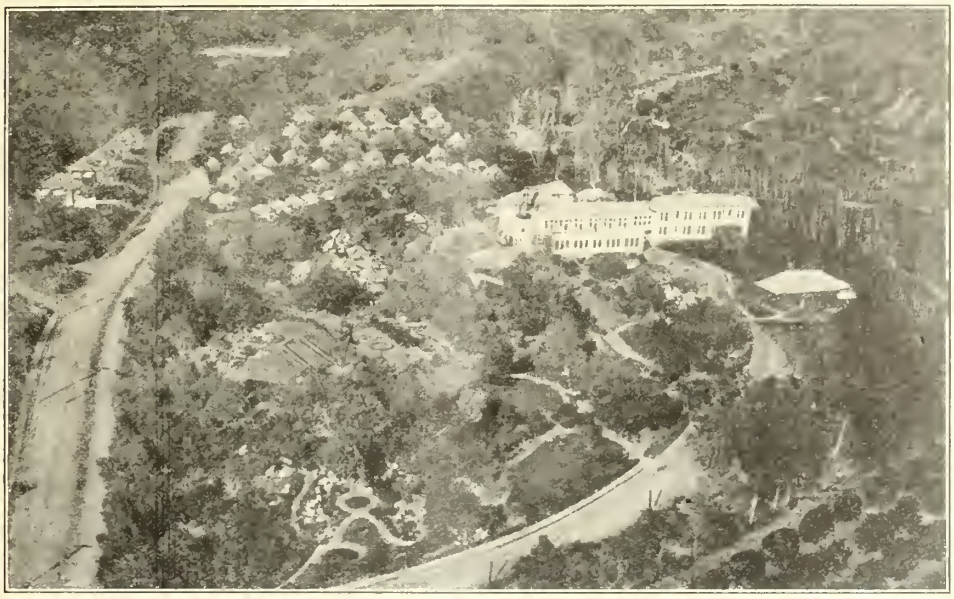

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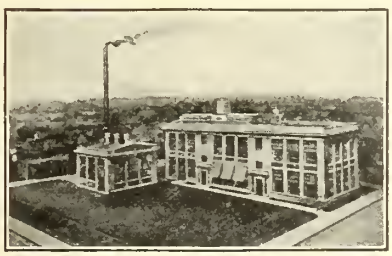

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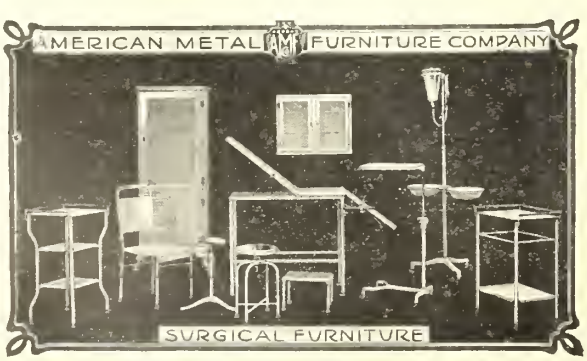

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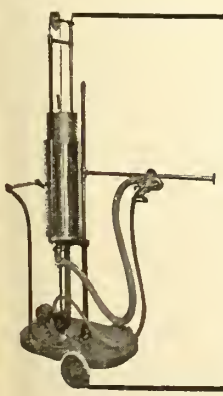

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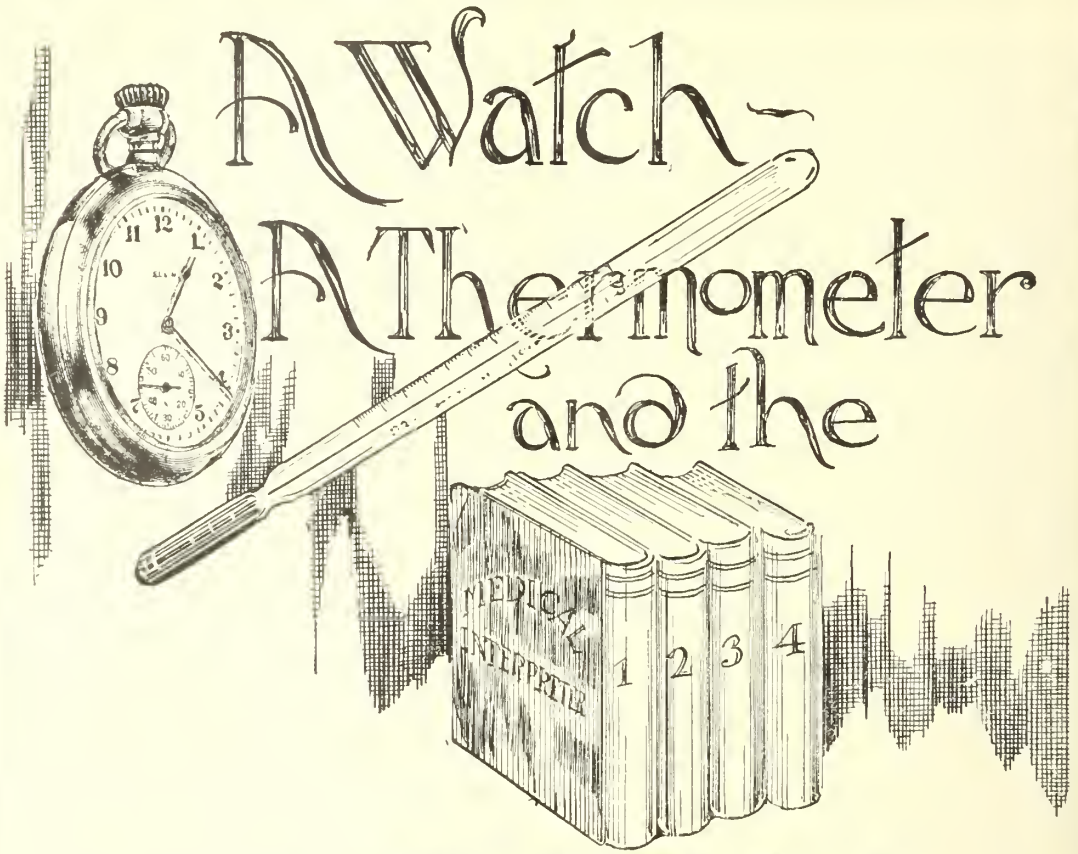

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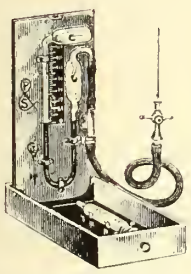

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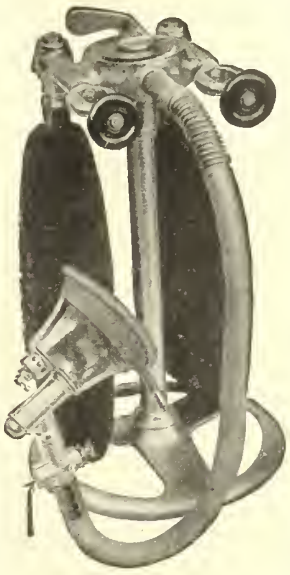

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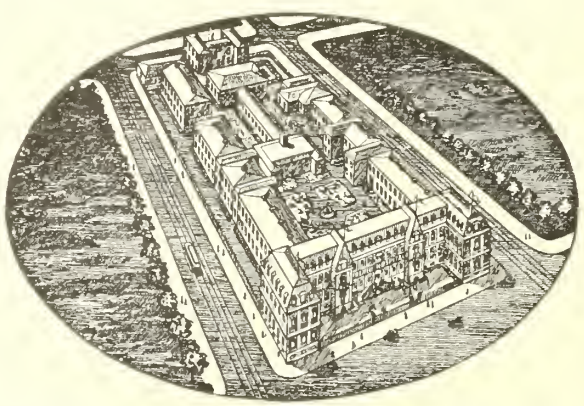

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Assets	$ 71,851,299.62
Deposits	68,201,299.62
Capital Actually Paid Up	1,000,000.00
Reserve and Contingent Funds	2,650,000.00
Employees' Pension Fund	371,753.46

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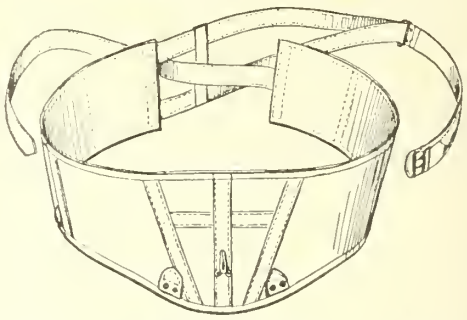

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It is the purpose of the Journal to develop on this page a list of advertisers who wish to insert classified advertisements. The same censorship will be applied to these advertisements as is now used in the reading columns and other advertising columns of the Journal. The space will be limited to five lines and advertisements will all be uniform in size and type. Suitable headings or classifications will be arranged as required. No advertisements will be accepted for less than six months, and the rates are $2.00 per issue.

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PHYSIOTHERAPISTS

The physiotherapists listed in this directory are all members of the California Association of Physiotherapists.

San Francisco

MISS CHARLOTTE H. BALLARD; 212 Medical Bldg.; Prospect 4100; Hours 4 to 6 p. m.

MISS ELSA DE GILLE; 2242 Polk St.; Sutter 3484; 7 to 9 p. m.

MISS HAZEL RUTH; 1264 Second Ave.; Sunset 3145; 6 to 8 p. m.

MISS ELIZABETH HENDERSON; 780 Post St.; Prospect 5809.

MISS HELEN PERRINE; 780 Post St.; Prospect 5809.

MISS HILDA RODWAY; 177 Post St.; Kearny 4229; by appointment.

MISS MARGARET STEVENSON; 177 Post St.; Kearny 4229; by appointment.

MISS GRETA WEDIN; 2242 Polk St.; Prospect 2444; after 4 p. m.

Oakland

MISS FLORENCE E. ATKINSON; 520 Central Bank Bldg.; Oakland 50; by appointment.

MISS FLORENCE C. BURRELL; 520 Central Bank Bldg.; Oakland 50; by appointment.

MISS FLORENCE E. THORNTON; 832 E. 21st St.; Merritt 5190; 9 to 5

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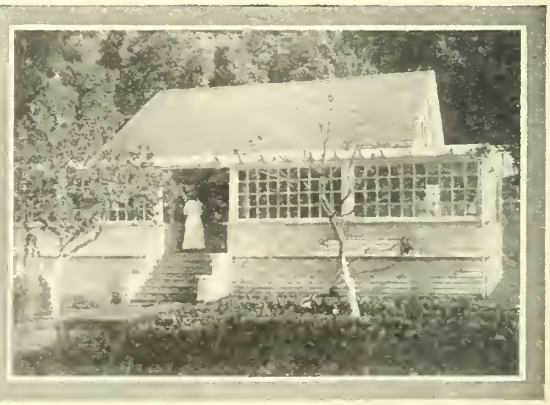

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LIST OF PRESIDENTS AND SECRETARIES OF COUNTY MEDICAL SOCIETIES

Counties.	President.	Secretary.	Meets.
Alameda County Medical Association	E. E. Brinkerhoff, Oakland	C. L. McVey, Oakland	3rd Monday, Oakland Hotel, Oakland.
Butte County Medical Society	P. F. Bullington	J. O. Chiapella, Chico	2d Thursday
Contra Costa County Medical Society	M. L. Fernandez, Pinole	L. St. John Hely, Richmond	Last Wednesday night.
Fresno County Medical Society	G. W. Walker, Fresno	Thos. F. Madden, Fresno	1st Tuesday.
Glenn County Medical Society	T. H. Brown, Orland	C. L. Terrill, Willows	Bi-monthly.
Humboldt County Medical Society	J. C. Hadley, Arcata	L. A. Wing, Eureka	2d Tuesday.
Imperial County Medical Society	W. W. Apple, El Centro	Frances P. Elliott, El Centro	
Kern County Medical Society	Joe K. Smith, Bakersfield	F. J. Cuneo, East Bakersfield	3d Monday.
Lassen-Plumas County Medical Society	W. E. Dozier, Susanville	R. W. T. Garner, Susanville	
Los Angeles County Medical Society	Frick, Los Angeles	Harlan Shoemaker Los Angeles	1st & 3d Thursday except July, Aug., Sept.
Marin County Medical Society	J. H. Kuser, San Anselmo	C. A. De Lancey, San Quentin	2d Thursday each month
Mendocino County Medical Society	L. K. Van Allen, Ukiah	Paul J. Bowman, Fort Bragg	Monthly.
Merced County Medical Society	E. R. Fountain, Merced	Brett Davis, Merced	1st Thursday.
Monterey County Medical Society	Chas. T. Bullard, King City	T. C. Edwards, Salinas	1st Saturday.
Napa County Medical Society	Edward F. Donnelly, Napa	Otto T. Schulze, Napa	1st Tuesday.
Orange County Medical Association	J. H. Lang, Fullerton	W. C. Mayes, Santa Ana	1st Tuesday.
Placer County Medical Society	C. J. Durand, Colfax	R. A. Peers, Colfax	1st Saturday every 2d month.
Riverside County Medical Society	Paul E. Simonds, Riverside	T. A. Card, Riverside	2d Monday.
Sacramento Society for Medical Improvement	G. P. Dillon, Sacramento	George J. Hall, Sacramento	3d Tuesday.
San Benito County Medical Society	L. C. Hull, Hollister	C. W. Merrill, Hollister	1st Monday.
San Bernardino Medical Association	L. M. Coy, San Bernardino	E. J. Eytinge, Redlands	1st Tuesday.
San Diego County Medical Society	W. W. Crawford, San Diego	G. B. Worthington, San Diego	2d and 4th Tuesdays.
San Francisco County Medical Society	Saxton Pope, San Francisco	Le Roy H. Briggs, S. F.	Every Tuesday.
San Joaquin County Medical Society	L. R. Johnson, Stockton	Dewey R. Powell, Stockton	4th Friday, except July and August.
San Luis Obispo County Medical Society	B. Y. Miller, San Luis Obispo	G. L. Sobey, Paso Robles	1st Saturday of each month.
San Mateo County Medical Society	C. V. Thompson, Pescadero	F. S. Gregory, Redwood City	1st Friday of each month.
Santa Barbara County Medical Ass'n	Wm. J. Mellinger, Santa Barbara	Alex C. Soper, Jr., Santa Barbara	2d Monday.
Santa Clara County Medical Society	Raymond Wayland, San Jose	E. P. Cook, San Jose	1st & 3d Wednesdays.
Santa Cruz County Medical Society	H. G. Watters, Watsonville	A. N. Nittler, Santa Cruz	1st Monday.
Shasta County Medical Society	A. B. Gilliland, Cottonwood	C. A. Mueller, Redding	Meets quarterly.
Siskiyou County Medical Society	J. R. Jones, Yreka	Robt. H. Heaney, Yreka	Meets 1st Monday each quarter.
Solano County Medical Society	E. B. Todd, Vallejo	A. V. Doran, Vallejo	3d Wednesday.
Sonoma County Medical Society	J. W. Shipley, Cloverdale	N. R. H. Juell, Santa Rosa	1st Friday.
Stanislaus County	A. M. Field, Patterson	R. E. Maxwell, Modesto	2d Friday except July and August.
Tehama County Medical Society	F. H. Bly, Red Bluff	F. L. Doane, Red Bluff	1st Tuesday.
Tulare County Medical Society	A. W. Preston, Visalia	E. R. Zumwalt, Tulare	
Tuolumne County Medical Society	E. H. Reid, Tuolumne	W. L. Hood, Sonora	
Ventura County Medical Society	W. R. Livingston, Oxnard	John G. Norman, Oxnard	Every two months.
Yolo County Society for Medical Improvement	W. E. Bates, Davis	Lela J. Beebe, Woodland	1st Tuesday, except July, Aug. and Sept.
Yuba-Sutter Counties Medical Society	Allen Gray, Marysville	A. L. Miller, Marysville	Meets every 2 months.

N. B.—Secretaries will please notify Journal office of any changes taking place in their respective counties.

DIRECTORY OF NATIONAL AND WESTERN MEDICAL AND HEALTH ORGANIZATIONS

Society	President	Secretary	Annual Meeting
American Medical Association	Hubert Work, Pueblo, Colo.	Alexander R. Craig, 535 N. Dearborn St., Chicago, Ill.	St. Louis, May 22, 1922
Arizona Medical Association	Albert L. Gustetter, Nogales	D. F. Harbridge, Goodrich Bldg., Phoenix	Prescott, 1922
California State Medical Society	John H. Graves, San Francisco	W. E. Musgrave, Butler Bldg., San Francisco	Yosemite Park, May 15-18, 1922
League for Conservation of Public Health	Dudley Smith, Oakland	Celestine J. Sullivan, Butler Bldg., San Francisco	Yosemite Park, May 15-18, 1922
Colorado State Medical Society	H. A. Smith, Delta	F. B. Stephenson, Metropolitan Bldg., Denver	
Idaho State Medical Society	H. W. Wilson, Twin Falls	E. E. Laubaugh, Overland Bldg., Boise	
Montana Medical Association	W. W. Andrus, Miles City	E. G. Balsam, Hart-Albin Bldg., Billings	Great Falls, July, 1922
Nevada State Medical Association	R. A. Bowdle, East Ely	Horace J. Brown, Goldfield	
New Mexico Medical Society	Chester Russell, Artesia	F. E. Tull, Albuquerque	
Oregon State Medical Association	Joseph A. Pettit, Portland	Raymond E. Watkins, Corbett Bldg., Portland	
Texas State Medical Association	T. J. Bennett, Austin	Holman Taylor, Texas State Bank Bldg., Ft. Worth	El Paso, May, 1922
Utah State Medical Association	R. R. Hampton, Salt Lake City	Wm. L. Rich, Boston Bldg., Salt Lake City	
Washington State Medical Assn	A. E. Burns, Seattle	C. H. Thomson, Cobb Bldg., Seattle	
Wyoming State Medical Society	E. A. Kell, Rawlins	Earl Whedon, Sheridan	
Calif. Assn. of Med. Soc. Workers	Louise Morrow, San Francisco	Edna J. Shirpser, 3700 California St., San Francisco	Yosemite Park, May 15-18, 1922
California Assn. of Physiotherapists	Hazel Furchgott, San Francisco	Florence Atkinson, 29 Mosswood Road, Berkeley	Yosemite Park, May 15-18, 1922
California Assn. of Radiographers	F. McCormack, San Francisco	Leonard Frank, Physicians Bldg., San Francisco	Yosemite Park, May 15-18, 1922
California State Board of Health	G. E. Ebright, San Francisco	Walter M. Dickie, Sacramento	
California Board Med. Examiners	P. T. Phillips, Santa Cruz	Chas. B. Pinkham, Flood Bldg., San Francisco	
Anesthetists, Northern Cal. Assn. of	Mary Botsford, San Francisco	Dorothy A. Wood, 1390 7th Ave., San Francisco	Yosemite, May 15, 1922
Anesthetists, Southern Cal. Assn. of	W. R. Crane, Los Angeles	Eleanor Seymour, 308 Cons. Realty Bldg., Los Angeles	Yosemite, May 15, 1922
Anesthetists, Pacific Coast Assn. of	Geo. P. Waller, Los Angeles	Eleanor Seymour, 308 Cons. Realty Bldg., Los Angeles	Yosemite, May 15, 1922
Los Angeles Orthopedic Society		Alfred E. Gallant, Van Nuys Bldg., Los Angeles	
San Francisco Orthopedic Club	J. T. Watkins, San Francisco	H. H. Markel, Butler Bldg., San Francisco	
Pacific Coast Roentgen Ray Society	W. W. Watkins, Phoenix, Ariz.	Roy Payne, Portland, Ore.	Phoenix, Ariz., Dec. 1-3, 1921
Western Section of American Roentgen-Ray Society	Albert Soiland, Los Angeles	W. W. Watkins, Phoenix, Ariz.	With Pacific Coast Roentgen-Ray Soc., May or June, 1922
Western Surgical Association	Chas. D. Lockwood, Pasadena	Warren A. Dennis, St. Paul, Minn.	St. Louis, Dec. 9-10, 1921
Southern Calif. Medical Assn.	Wm. Duffield, Auditorium Bldg., Los Angeles	Egerton Crispin, Los Angeles	San Diego, April 7-8, 1922

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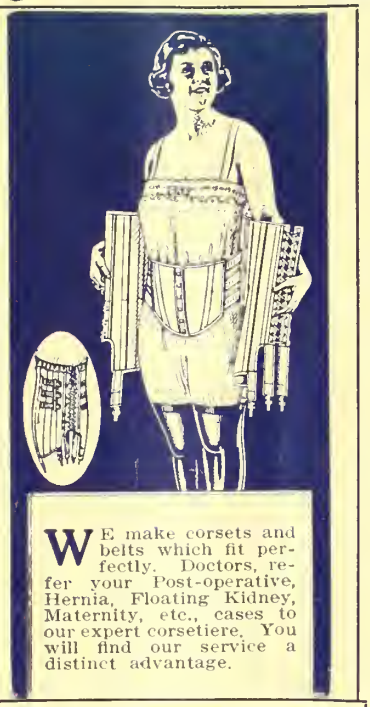

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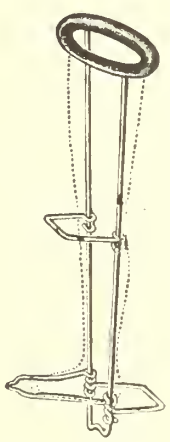

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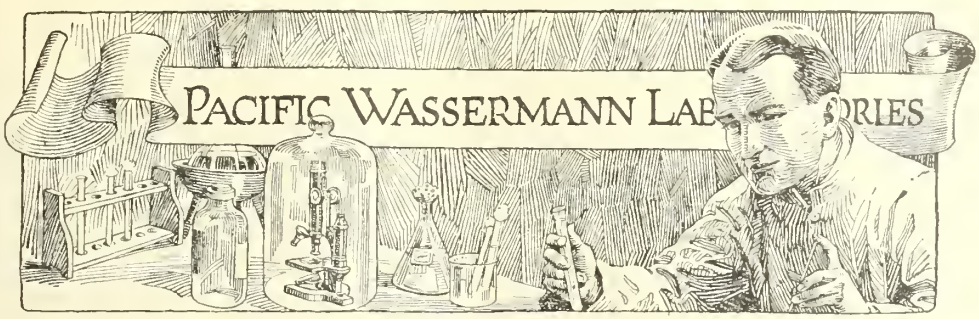

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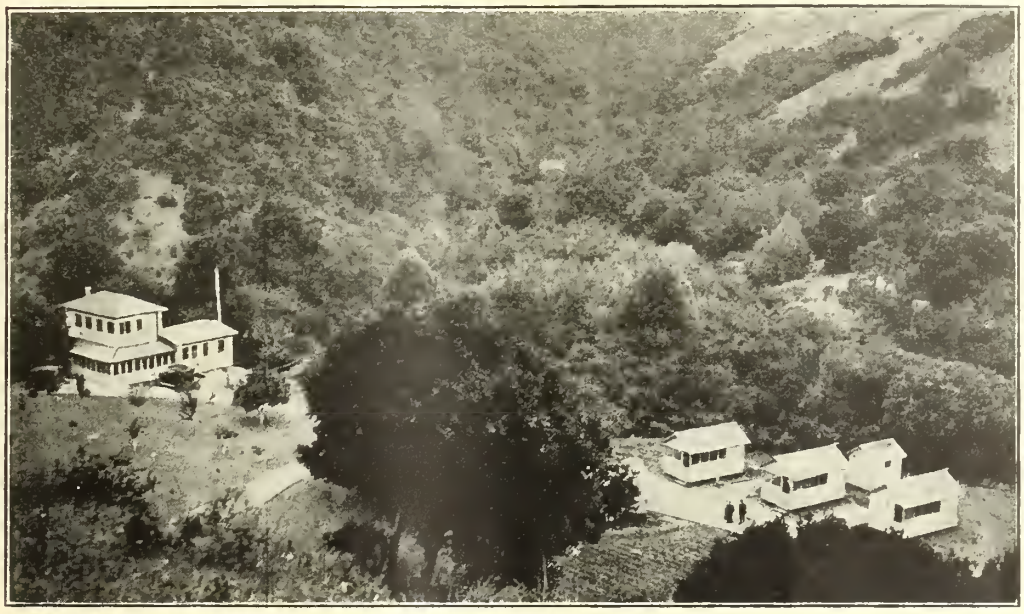

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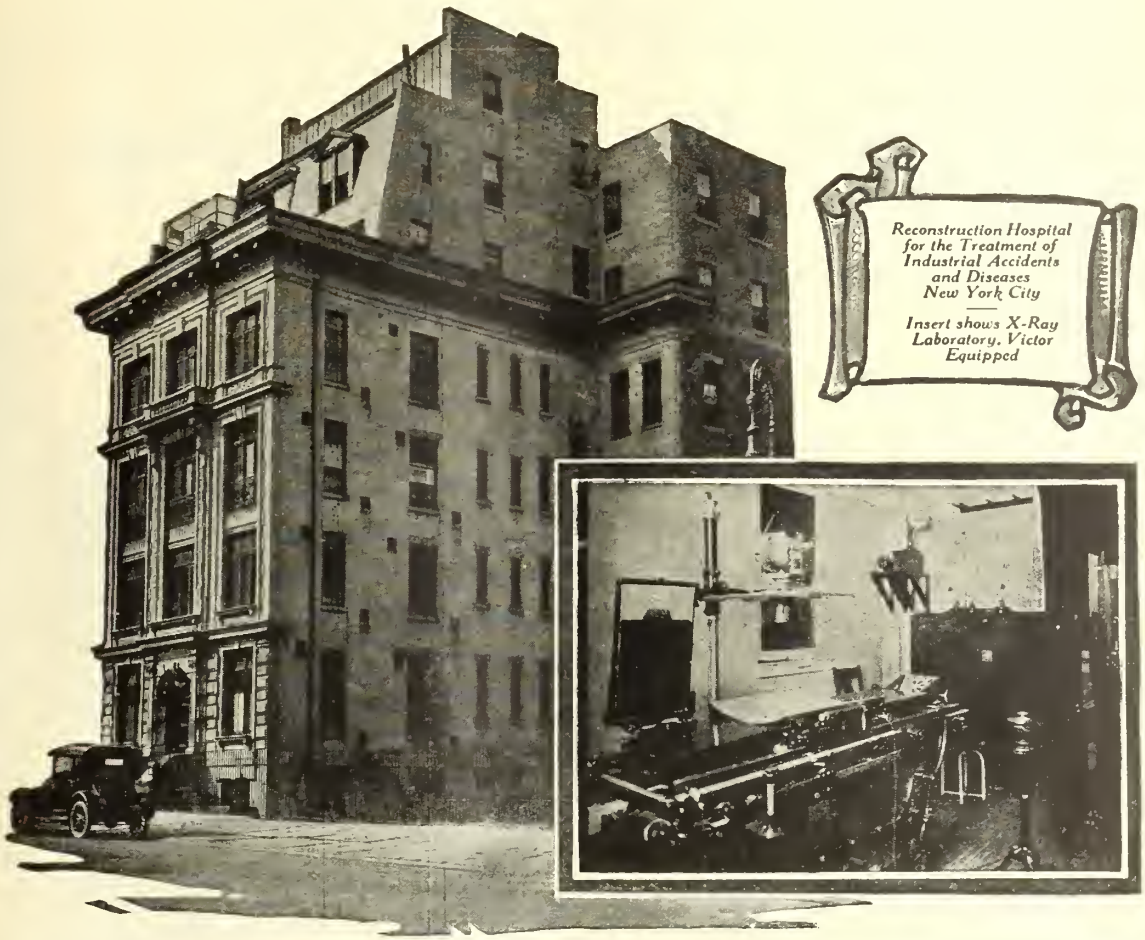

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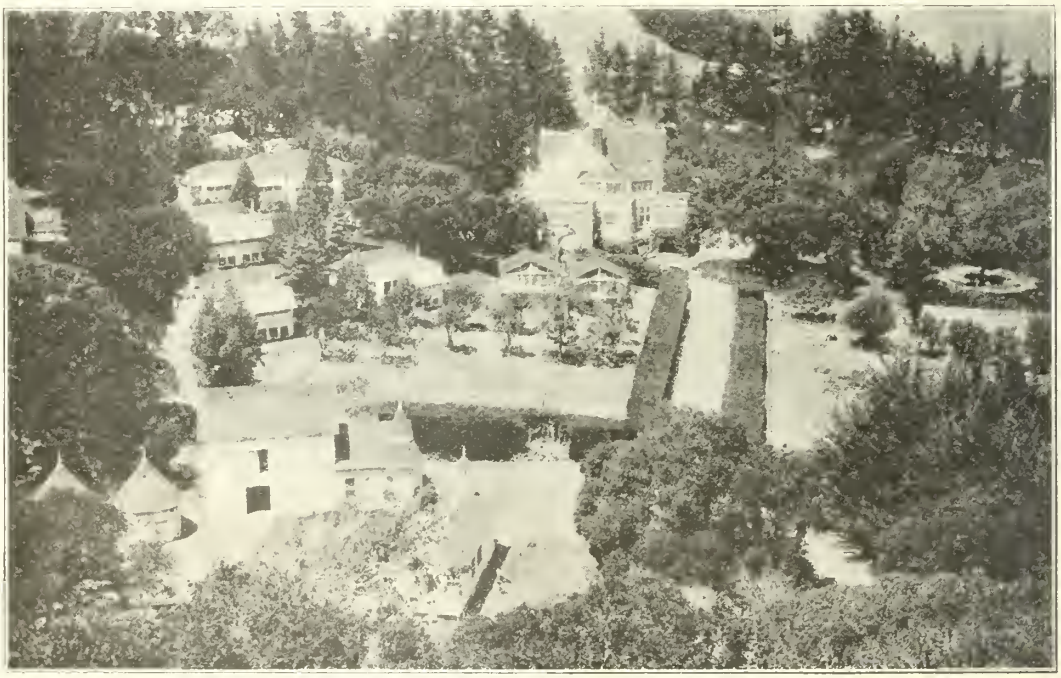

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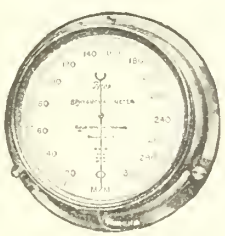

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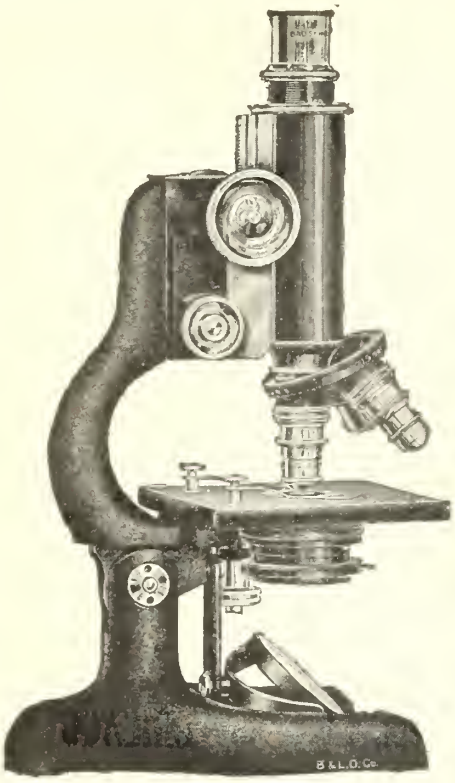

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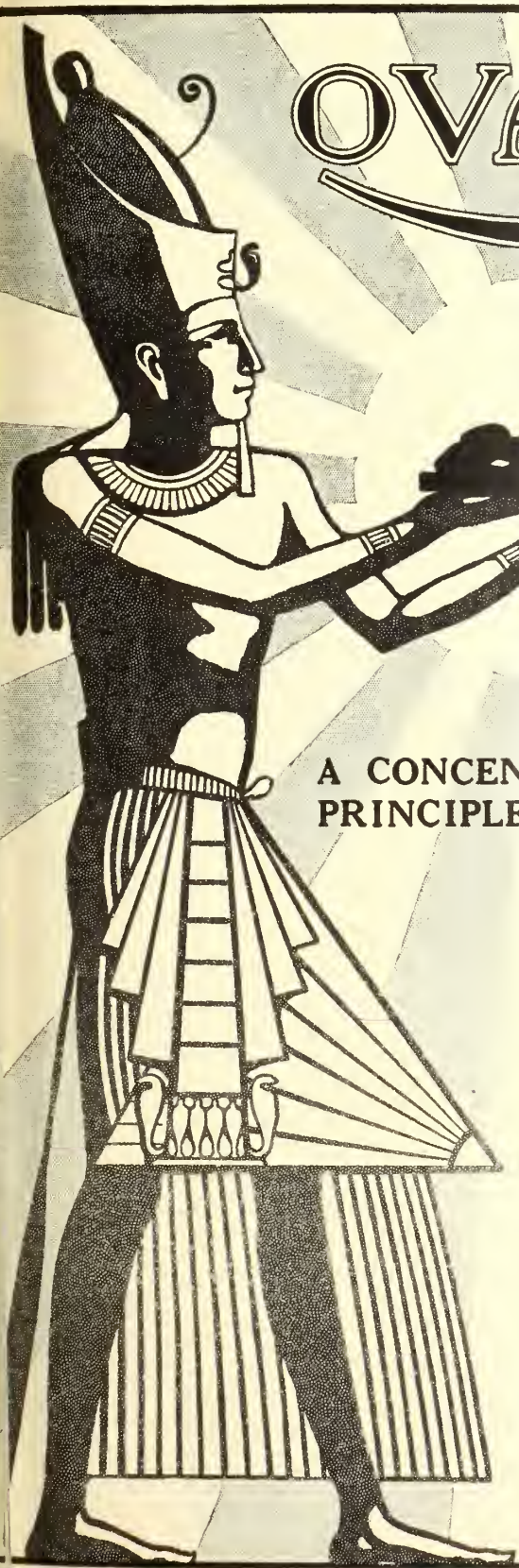

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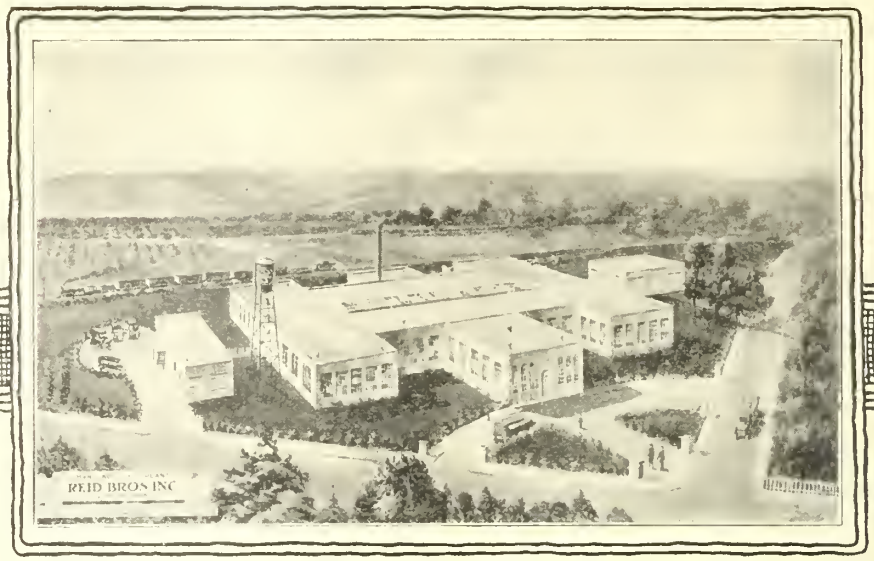

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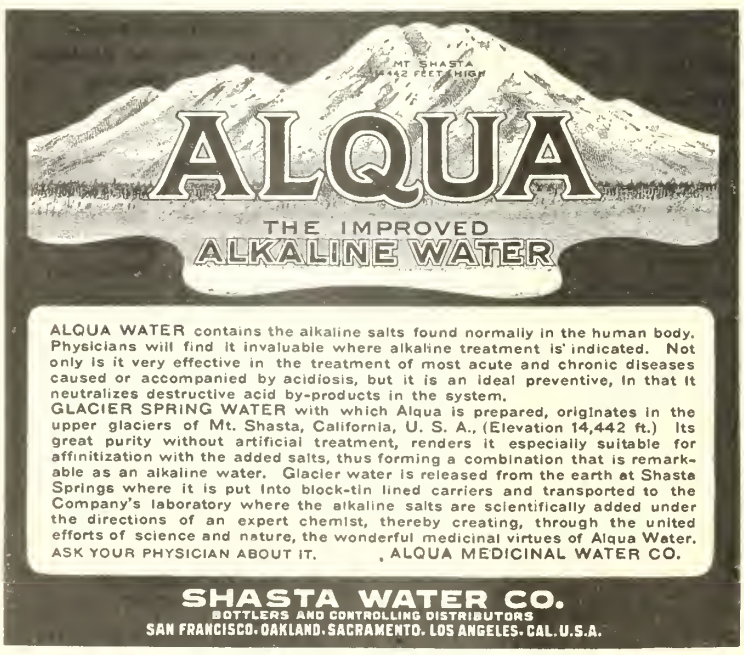

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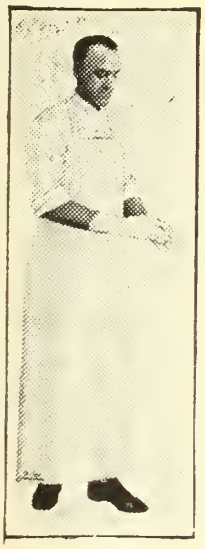

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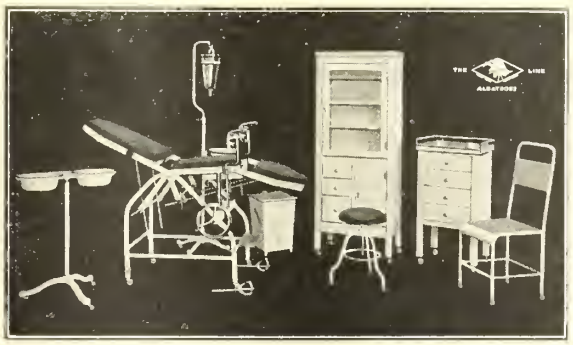

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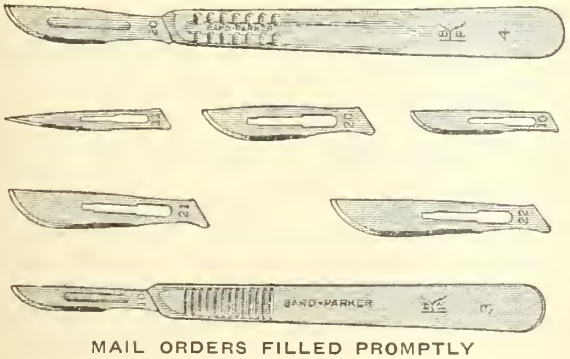

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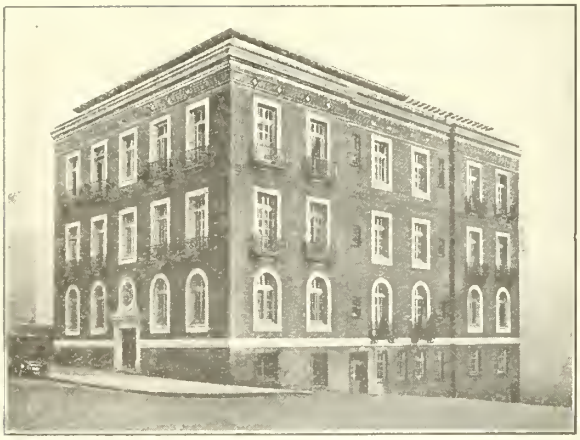

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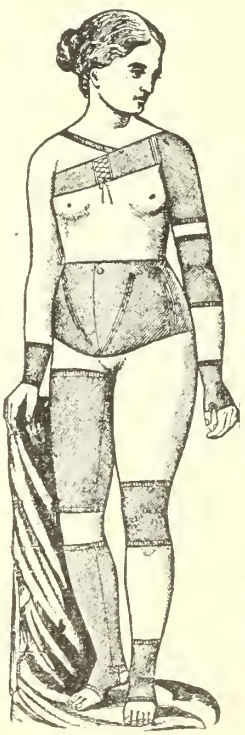

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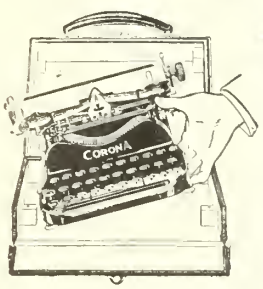

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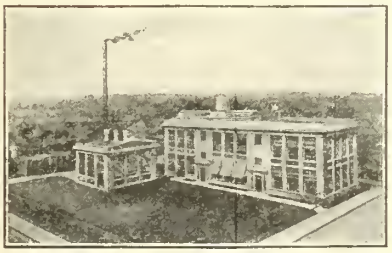

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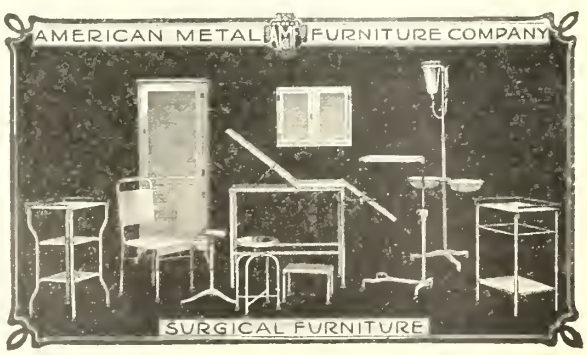

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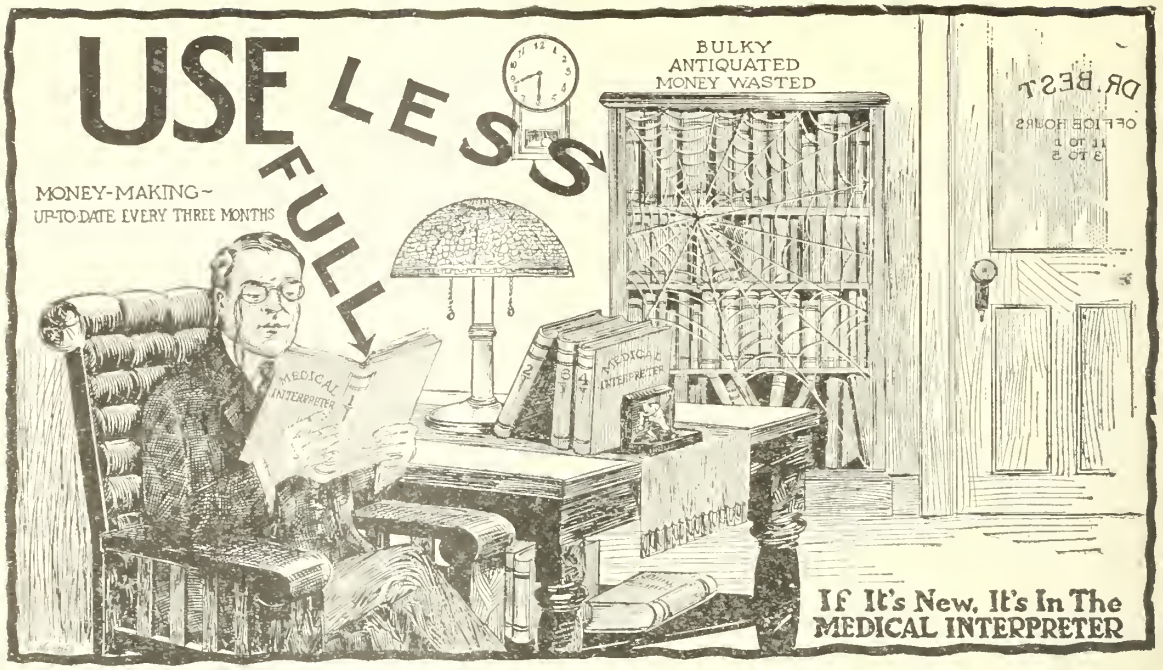

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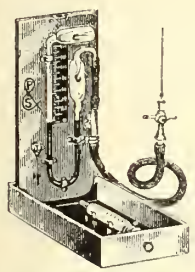

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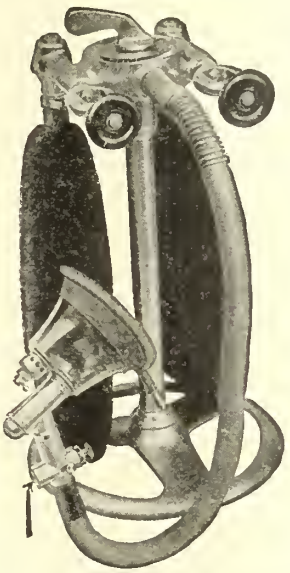

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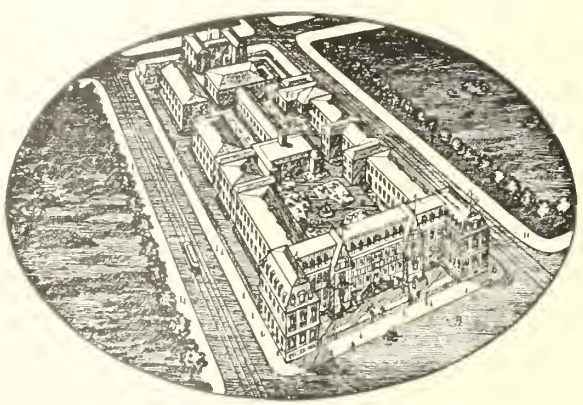

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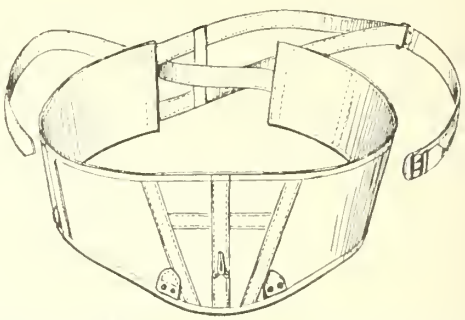

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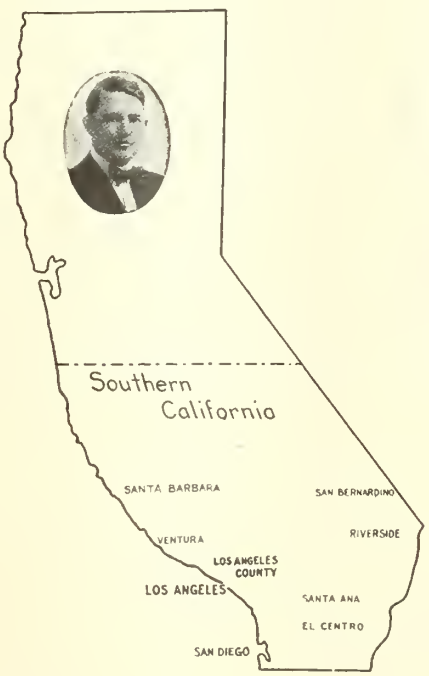

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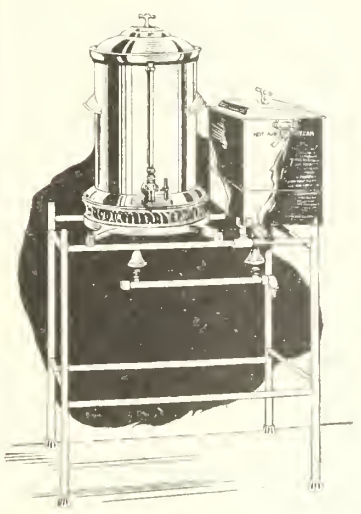

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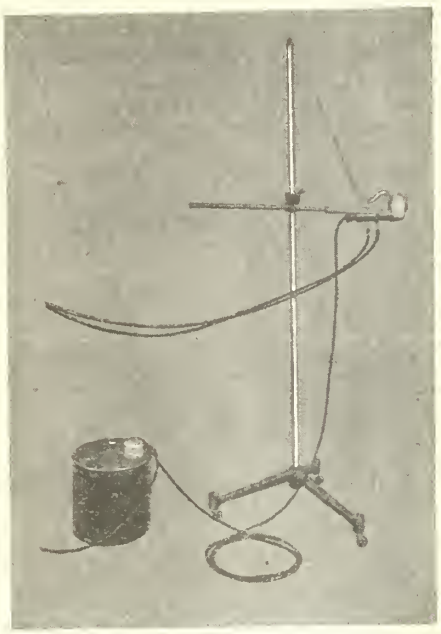

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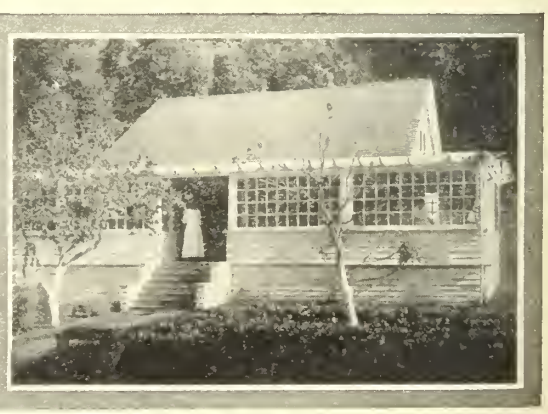

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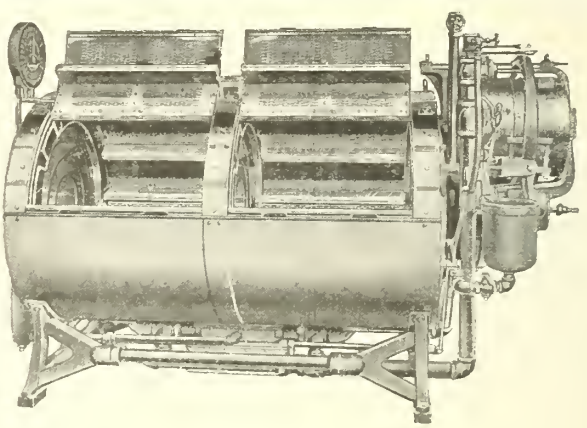

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LIST OF PRESIDENTS AND SECRETARIES OF COUNTY MEDICAL SOCIETIES

Counties.	President.	Secretary.	Meets.
Alameda County Medical Association	E. E. Brinkerhoff, Oakland	C. L. McVey, Oakland	3rd Monday. Oakland Hotel, Oakland.
Butte County Medical Society	P. F. Bullington	J. O. Chiapella, Chico	2d Thursday
Contra Costa County Medical Society	M. L. Fernandez, Pinole	L. St. John Hely, Richmond	Last Wednesday night.
Fresno County Medical Society	G. W. Walker, Fresno	Thos. F. Madden, Fresno	1st Tuesday.
Glenn County Medical Society	Etta S. Lund, Willows	C. L. Terrill, Willows	Bi-monthly.
Humboldt County Medical Society	J. C. Hadley, Arcata	L. A. Wing, Eureka	2d Tuesday.
Imperial County Medical Society	W. W. Apple, El Centro	Frances P. Elliott, El Centro	
Kern County Medical Society	Joe K. Smith, Bakersfield	P. J. Cuneo, East Bakersfield	3d Monday.
Lassen-Plumas County Medical Society	W. E. Dozier, Susanville	R. W. T. Garner, Susanville	
Los Angeles County Medical Society	Frick, Los Angeles	Harlan Shoemaker Los Angeles	1st & 3d Thursday except July, Aug., Sept.
Madera County Medical Society	Dow H. Ransom, Madera	R. R. Dearborn, Madera	
Marin County Medical Society	J. H. Kuser, San Anselmo	C. A. De Lancey, San Quentin	2d Thursday each month
Mendocino County Medical Society	L. K. Van Allen, Ukiah	Paul J. Bowman, Fort Bragg	Monthly.
Merced County Medical Society	E. R. Fountain, Merced	Brett Davis, Merced	1st Thursday.
Monterey County Medical Society	Chas. T. Bullard, King City	T. C. Edwards, Salinas	1st Saturday.
Napa County Medical Society	Edward F. Donnelly, Napa	Otto T. Schulze, Napa	1st Tuesday.
Orange County Medical Association	J. H. Lang, Fullerton	W. C. Mayes, Santa Ana	1st Tuesday.
Placer County Medical Society	C. J. Durand, Colfax	R. A. Peers, Colfax	1st Saturday every 2d month.
Riverside County Medical Society	Paul E. Simonds, Riverside	T. A. Card, Riverside	2d Monday.
Sacramento Society for Medical Improvement	G. P. Dillon, Sacramento	George J. Hall, Sacramento	3d Tuesday.
San Benito County Medical Society	L. C. Hull, Hollister	C. W. Merrill, Hollister	1st Monday.
San Bernardino Medical Association	L. M. Coy, San Bernardino	E. J. Eytinge, Redlands	1st Tuesday.
San Diego County Medical Society	W. W. Crawford, San Diego	G. B. Worthington, San Diego	2d and 4th Tuesdays.
San Francisco County Medical Society	Saxton Pope, San Francisco	Le Roy H. Briggs, S. F.	Every Tuesday.
San Joaquin County Medical Society	L. R. Johnson, Stockton	Dewey R. Powell, Stockton	4th Friday, except July and August.
San Luis Obispo County Medical Society	B. Y. Miller, San Luis Obispo	G. L. Sobey, Paso Robles	1st Saturday of each month.
San Mateo County Medical Society	C. V. Thompson, Pescadero	F. S. Gregory, Redwood City	1st Friday of each month.
Santa Barbara County Medical Ass'n	Wm. J. Mellinger, Santa Barbara	Alex C. Soper, Jr., Santa Barbara	2d Monday.
Santa Clara County Medical Society	Raymond Wayland, San Jose	E. P. Cook, San Jose	1st & 3d Wednesdays.
Santa Cruz County Medical Society	H. G. Watters, Watsonville	A. N. Nittler, Santa Cruz	1st Monday.
Shasta County Medical Society	A. B. Gilliland, Cottonwood	C. A. Mueller, Redding	Meets quarterly.
Siskiyou County Medical Society	J. R. Jones, Yreka	Robt. H. Heaney, Yreka	Meets 1st Monday each quarter.
Solano County Medical Society	E. B. Todd, Vallejo	A. V. Doran, Vallejo	3d Wednesday.
Sonoma County Medical Society	J. W. Shipley, Cloverdale	N. R. H. Juell, Santa Rosa	1st Friday.
Stanislaus County	A. M. Field, Patterson	R. E. Maxwell, Modesto	2d Friday except July and August.
Tehama County Medical Society	F. H. Bly, Red Bluff	F. L. Doane, Red Bluff	1st Tuesday.
Tulare County Medical Society	A. W. Preston, Visalia	E. R. Zumwalt, Tulare	
Tuolumne County Medical Society	E. H. Reid, Tuolumne	W. L. Hood, Sonora	
Ventura County Medical Society	W. R. Livingston, Oxnard	Allen Peek, Santa Paula	Every two months.
Yolo County Society for Medical Improvement	W. E. Bates, Davis	Lela J. Beebe, Woodland	1st Tuesday, except July, Aug. and Sept.
Yuba-Sutter Counties Medical Society	Allen Gray, Marysville	A. L. Miller, Marysville	Meets every 2 months.

N. B.—Secretaries will please notify Journal office of any changes taking place in their respective counties.

DIRECTORY OF NATIONAL AND WESTERN MEDICAL AND HEALTH ORGANIZATIONS

Society	President	Secretary	Annual Meeting
American Medical Association	Hubert Work, Pueblo, Colo.	Alexander R. Craig, 535 N. Dearborn St., Chicago, Ill.	St. Louis, May 22, 1922
Arizona Medical Association	Albert L. Gustetter, Nogales	D. F. Harbridge, Goodrich Bldg., Phoenix	Prescott, 1922
California State Medical Society	John H. Graves, San Francisco	W. E. Musgrave, Butler Bldg., San Francisco	Yosemite Park, May 15-18, 1922
League for Conservation of Public Health	Dudley Smith, Oakland	Celestine J. Sullivan, Butler Bldg., San Francisco	Yosemite Park, May 15-18, 1922
Colorado State Medical Society	H. A. Smith, Delta	F. B. Stephenson, Metropolitan Bldg., Denver	
Idaho State Medical Society	H. W. Wilson, Twin Falls	E. E. Laubaugh, Overland Bldg., Boise	
Montana Medical Association	W. W. Andrus, Miles City	E. G. Balsam, Hart-Albin Bldg., Billings	Great Falls, July, 1922
Nevada State Medical Association	R. A. Bowdle, East Ely	Horace J. Brown, Goldfield	
New Mexico Medical Society	Chester Russell, Artesia	F. E. Tull, Albuquerque	
Oregon State Medical Association	Joseph A. Pettit, Portland	Raymond E. Watkins, Corbett Bldg., Portland	
Texas State Medical Association	T. J. Bennett, Austin	Holman Taylor, Texas State Bank Bldg., Ft. Worth	El Paso, May, 1922
Utah State Medical Association	R. R. Hampton, Salt Lake City	Wm. L. Rich, Boston Bldg., Salt Lake City	
Washington State Medical Assn	A. E. Burns, Seattle	C. H. Thomson, Cobb Bldg., Seattle	
Wyoming State Medical Society	E. A. Kell, Rawlins	Earl Whedon, Sheridan	
Calif. Assn. of Med. Soc. Workers	Louise Morrow, San Francisco	Edna J. Shirpser, 3700 California St., San Francisco	Yosemite Park, May 15-18, 1922
California Assn. of Physiotherapists	Hazel Furchgott, San Francisco	Florence Atkinson, 29 Mosswood Road, Berkeley	Yosemite Park, May 15-18, 1922
California Assn. of Radiographers	F. McCormack, San Francisco	Leonard Frank, Physicians Bldg., San Francisco	Yosemite Park, May 15-18, 1922
California State Board of Health	G. E. Ebright, San Francisco	Walter M. Dickie, Sacramento	
California Board Med. Examiners	P. T. Phillips, Santa Cruz	Chas. B. Pinkham, Flood Bldg., San Francisco	
Anesthetists, Northern Cal. Assn. of	Mary Botsford, San Francisco	Dorothy A. Wood, 1390 7th Ave., San Francisco	Yosemite, May 15, 1922
Anesthetists, Southern Cal. Assn. of	W. R. Crane, Los Angeles	Eleanor Seymour, 308 Cons. Realty Bldg., Los Angeles	Yosemite, May 15, 1922
Anesthetists, Pacific Coast Assn. of	Geo. P. Waller, Los Angeles	Eleanor Seymour, 308 Cons. Realty Bldg., Los Angeles	Yosemite, May 15, 1922
Los Angeles Orthopedic Society		Alfred E. Gallant, Van Nuys Bldg., Los Angeles	
San Francisco Orthopedic Club	J. T. Watkins, San Francisco	H. H. Markel, Butler Bldg., San Francisco	
Pacific Coast Roentgen Ray Society	W. W. Watkins, Phoenix, Ariz.	Roy Payne, Portland, Ore.	Phoenix, Ariz., Dec. 1-3, 1921
Western Section of American Roentgen-Ray Society	Albert Soiland, Los Angeles	W. W. Watkins, Phoenix, Ariz.	With Pacific Coast Roentgen-Ray Soc., May or June, 1922
Medical and Surgical Assn. of the Southwest	M. K. Wylder, Albuquerque, N. M.	H. R. Carson, Goodrich Bldg., Phoenix, Ariz.	
Western Surgical Association	Chas. D. Lockwood, Pasadena	Warren A. Dennis, St. Paul, Minn.	St. Louis, Dec. 9-10, 1921
Southern Calif. Medical Assn.	Wm. Duffield, Auditorium Bldg., Los Angeles	Egerton Crispin, Los Angeles	San Diego, April 7-8, 1922

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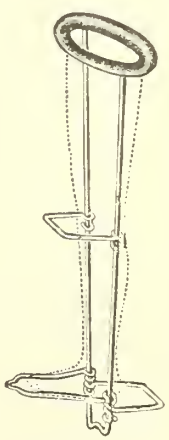

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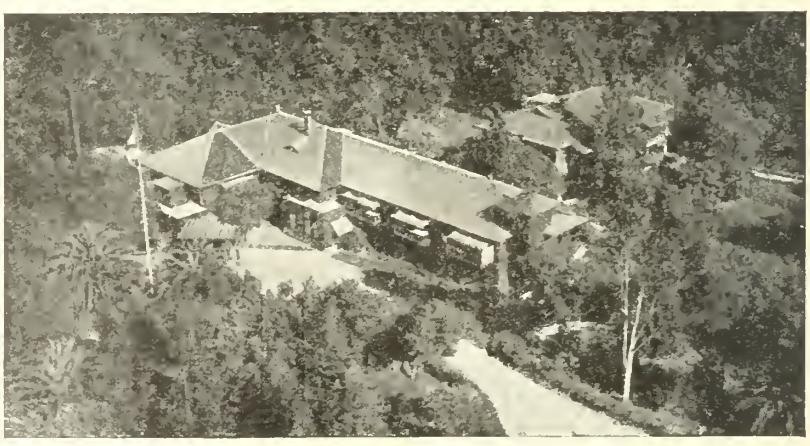

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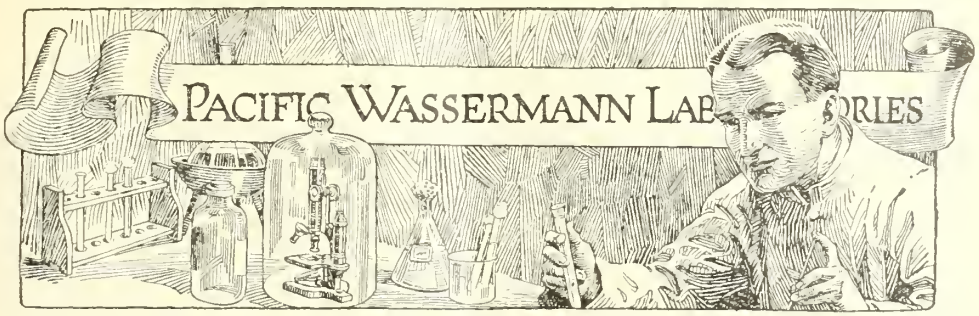

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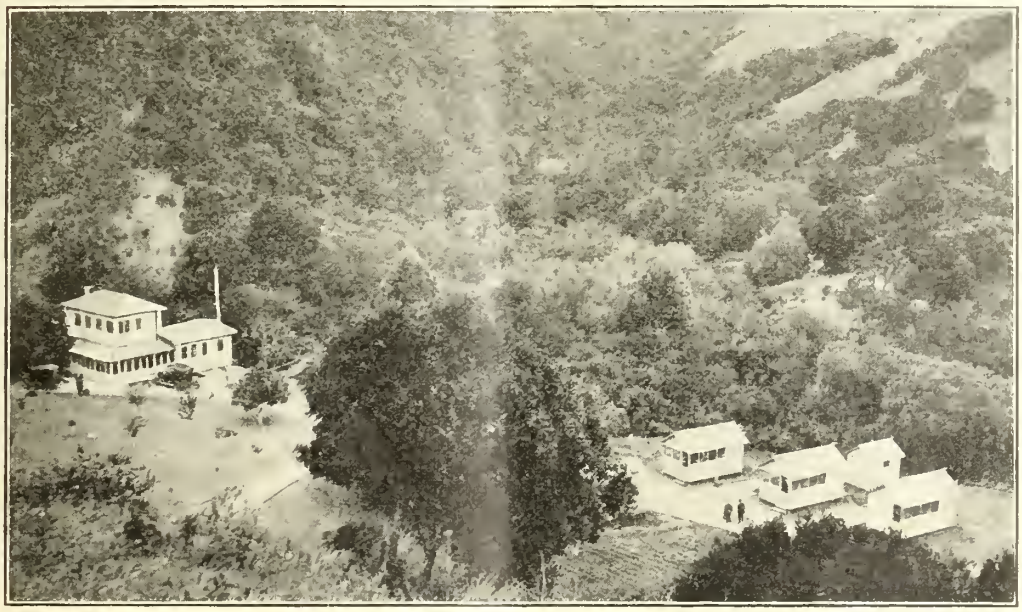

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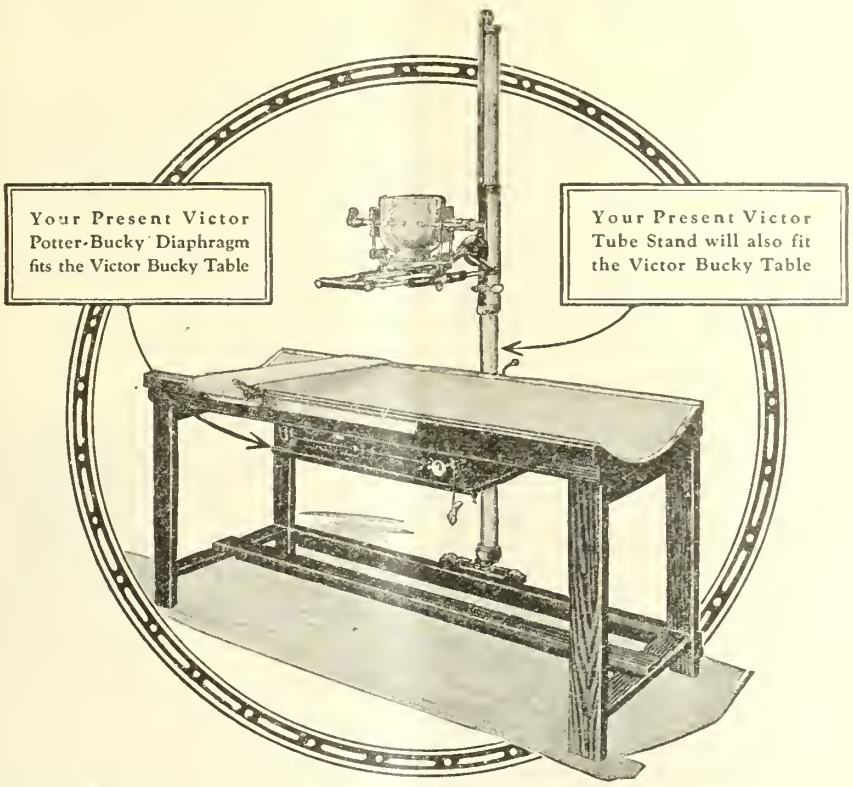

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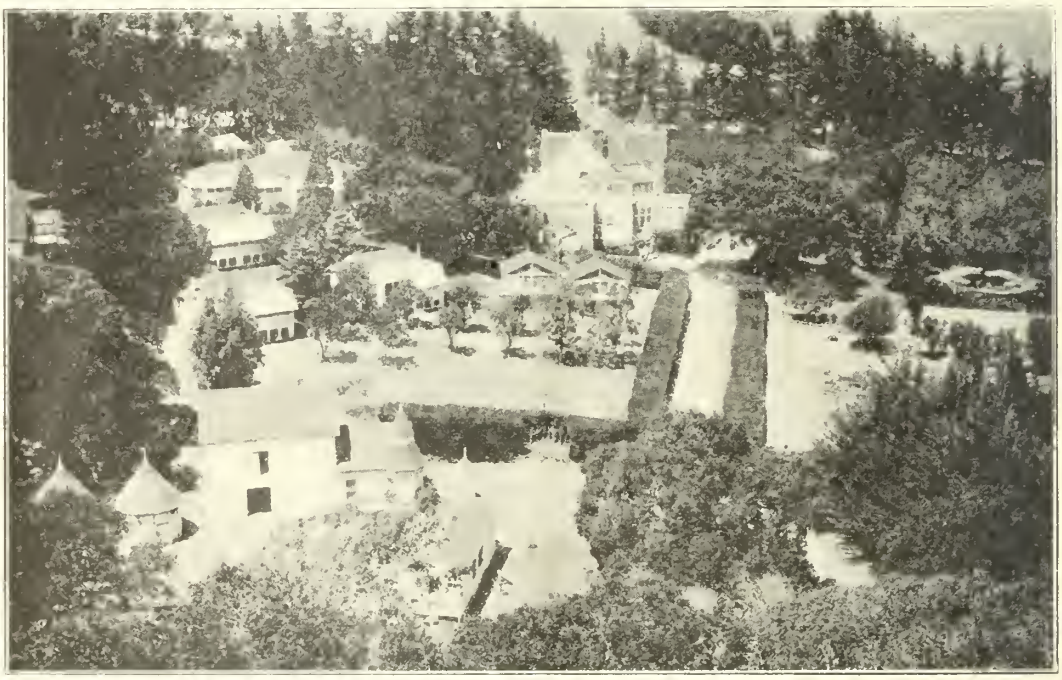

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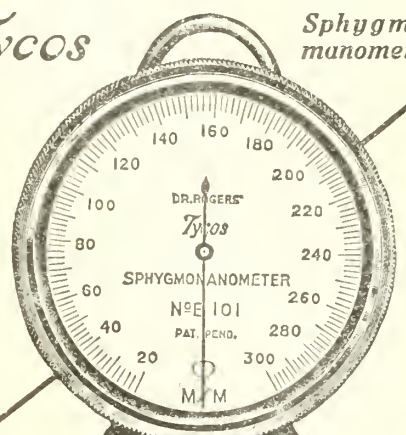

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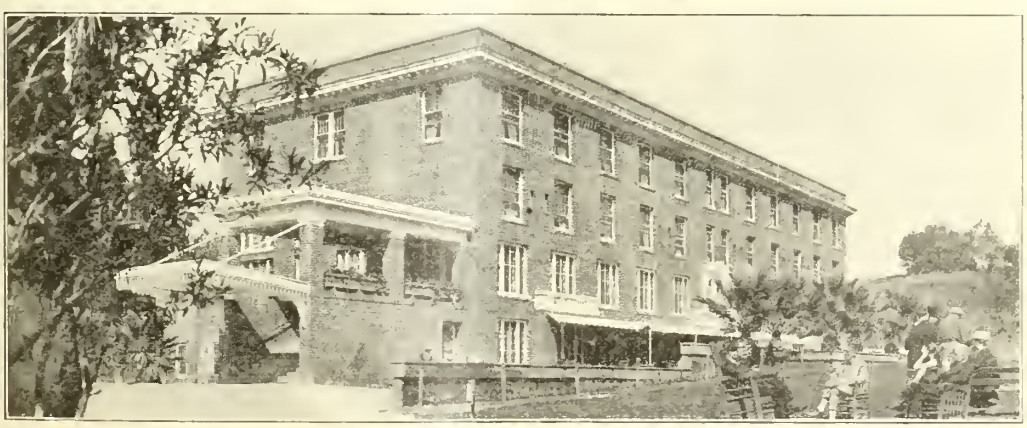

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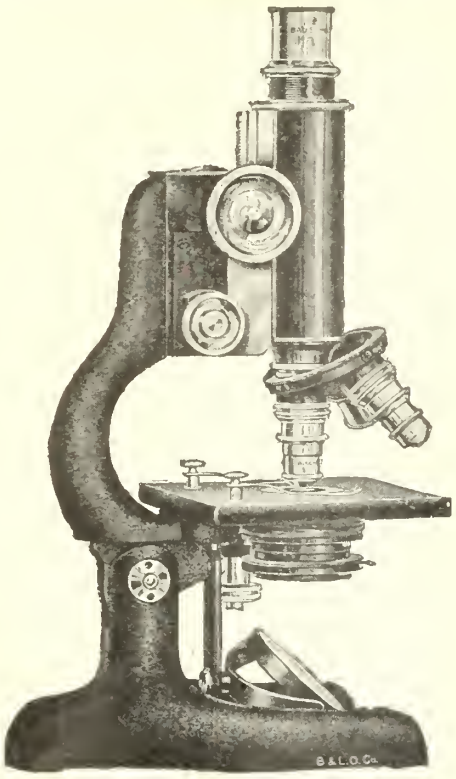

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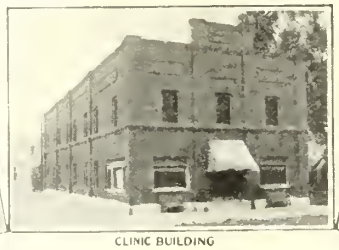
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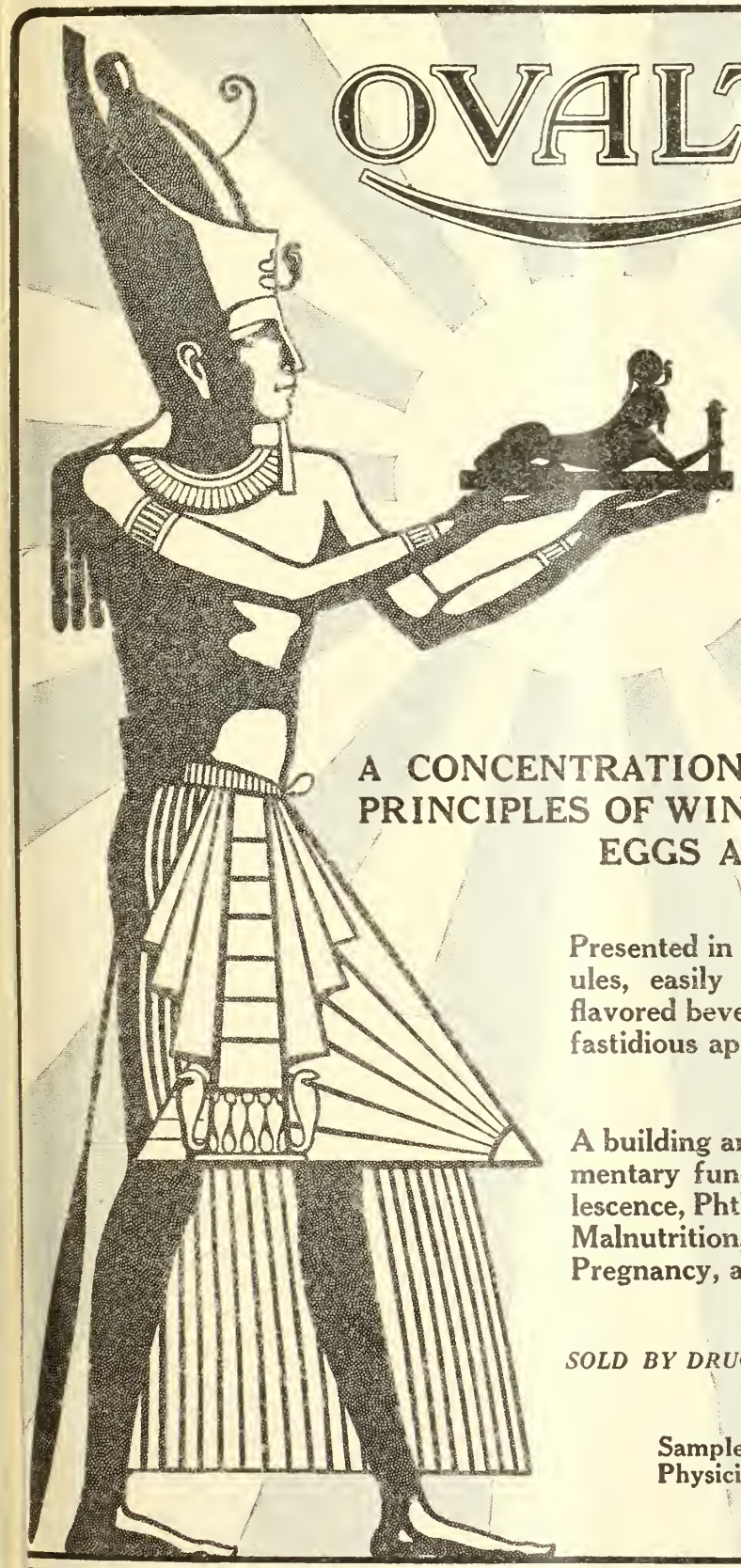

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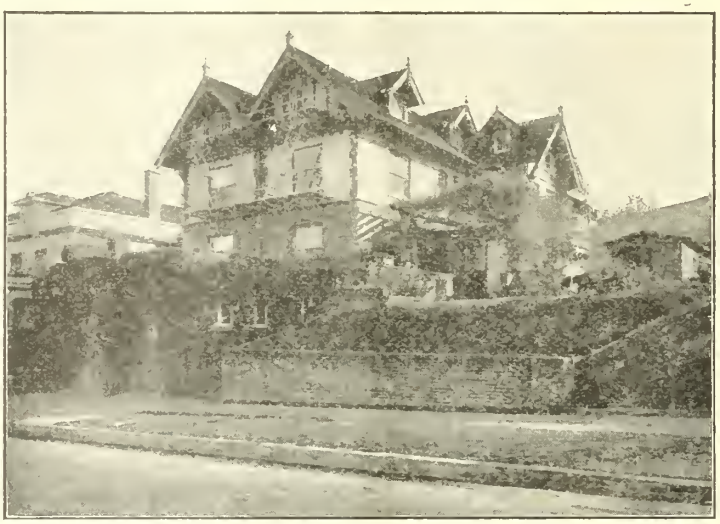

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Counties.	President.	Secretary.	Meets.
Alameda County Medical Association	E. E. Brinkerhoff, Oakland	C. L. McVey, Oakland	3rd Monday, Oakland Hotel, Oakland.
Butte County Medical Society	P. F. Bullington	J. O. Chiapella, Chico	2d Thursday
Contra Costa County Medical Society	H. L. Carpenter, Richmond	L. St. John Hely, Richmond	Last Wednesday night.
Fresno County Medical Society	G. W. Walker, Fresno	Thos. F. Madden, Fresno	1st Tuesday.
Glenn County Medical Society	Etta S. Lund, Willows	C. L. Terrill, Willows	Bi-monthly.
Humboldt County Medical Society	J. C. Hadley, Arcata	L. A. Wing, Eureka	2d Tuesday.
Imperial County Medical Society	W. W. Apple, El Centro	Frances P. Elliott, El Centro	
Kern County Medical Society	Joe K. Smith, Bakersfield	P. J. Cuneo, East Bakersfield	3d Monday.
Lassen-Plumas County Medical Society	W. E. Dozier, Susanville	R. W. T. Garner, Susanville	
Los Angeles County Medical Society	Frick, Los Angeles	Harlan Shoemaker Los Angeles	1st & 3d Thursday except July, Aug., Sept.
Madera County Medical Society	Dow H. Ransom, Madera	R. R. Dearborn, Madera	
Marin County Medical Society	J. H. Kuser, San Anselmo	C. A. De Lancey, San Quentin	2d Thursday each month
Mendocino County Medical Society	L. K. Van Allen, Ukiah	Paul J. Bowman, Fort Bragg	Monthly.
Merced County Medical Society	E. R. Fountain, Merced	Brett Davis, Merced	1st Thursday.
Monterey County Medical Society	Chas. T. Bullard, King City	T. C. Edwards, Salinas	1st Saturday.
Napa County Medical Society	Edward F. Donnelly, Napa	Otto T. Schulze, Napa	1st Tuesday.
Orange County Medical Association	J. H. Lang, Fullerton	W. C. Mayes, Santa Ana	1st Tuesday.
Placer County Medical Society	C. J. Durand, Colfax	R. A. Peers, Colfax	1st Saturday every 2d month.
Riverside County Medical Society	Paul E. Simonds, Riverside	T. A. Card, Riverside	2d Monday.
Sacramento Society for Medical Improvement	G. P. Dillon, Sacramento	George J. Hall, Sacramento	3d Tuesday.
San Benito County Medical Society	L. C. Hull, Hollister	C. W. Merrill, Hollister	1st Monday.
San Bernardino Medical Association	L. M. Coy, San Bernardino	E. J. Eytinge, Redlands	1st Tuesday.
San Diego County Medical Society	W. W. Crawford, San Diego	G. B. Worthington, San Diego	2d and 4th Tuesdays.
San Francisco County Medical Society	Saxton Pope, San Francisco	Le Roy H. Briggs, S. F.	Every Tuesday.
San Joaquin County Medical Society	L. R. Johnson, Stockton	Dewey R. Powell, Stockton	4th Friday, except July and August.
San Luis Obispo County Medical Society	B. Y. Miller, San Luis Obispo	G. L. Sobey, Paso Robles	1st Saturday of each month.
San Mateo County Medical Society	C. V. Thompson, Pescadero	F. S. Gregory, Redwood City	1st Friday of each month.
Santa Barbara County Medical Ass'n	Wm. J. Mellinger, Santa Barbara	Alex C. Soper, Jr., Santa Barbara	2d Monday.
Santa Clara County Medical Society	Raymond Wayland, San Jose	E. P. Cook, San Jose	1st & 3d Wednesdays.
Santa Cruz County Medical Society	H. G. Watters, Watsonville	A. N. Nittler, Santa Cruz	1st Monday.
Shasta County Medical Society	A. B. Gilliland, Cottonwood	C. A. Mueller, Redding	Meets quarterly.
Siskiyou County Medical Society	J. R. Jones, Yreka	Robt. H. Heaney, Yreka	Meets 1st Monday each quarter.
Solano County Medical Society	E. B. Todd, Vallejo	A. V. Doran, Vallejo	3d Wednesday.
Sonoma County Medical Society	J. W. Shipley, Cloverdale	N. R. H. Juell, Santa Rosa	1st Friday.
Stanislaus County	A. M. Field, Patterson	R. E. Maxwell, Modesto	2d Friday except July and August.
Tehama County Medical Society	F. H. Bly, Red Bluff	F. L. Doane, Red Bluff	1st Tuesday.
Tulare County Medical Society	A. W. Preston, Visalia	E. R. Zumwalt, Tulare	
Tuolumne County Medical Society	E. H. Reid, Tuolumne	W. L. Hood, Sonora	
Ventura County Medical Society	W. R. Livingston, Oxnard	Allen Peek, Santa Paula	Every two months.
Yolo County Society for Medical Improvement	W. E. Bates, Davis	Lela J. Beebe, Woodland	1st Tuesday, except July, Aug. and Sept.
Yuba-Sutter Counties Medical Society	Allen Gray, Marysville	A. L. Miller, Marysville	Meets every 2 months.

N. B.—Secretaries will please notify Journal office of any changes taking place in their respective counties.

DIRECTORY OF NATIONAL AND WESTERN MEDICAL AND HEALTH ORGANIZATIONS

Society	President	Secretary	Annual Meeting
American Medical Association	Hubert Work, Pueblo, Colo.	Alexander R. Craig, 535 N. Dearborn St., Chicago, Ill.	St. Louis, May 22, 1922
Arizona Medical Association	Albert L. Gustetter, Nogales	D. F. Harbridge, Goodrich Bldg., Phoenix	Prescott, 1922
California State Medical Society	John H. Graves, San Francisco	W. E. Musgrave, Butler Bldg., San Francisco	Yosemite Park, May 15-18, 1922
League for Conservation of Public Health	Dudley Smith, Oakland	Celestine J. Sullivan, Butler Bldg., San Francisco	Yosemite Park, May 15-18, 1922
Colorado State Medical Society	H. A. Smith, Delta	F. B. Stephenson, Metropolitan Bldg., Denver	
Idaho State Medical Society	H. W. Wilson, Twin Falls	E. E. Laubaugh, Overland Bldg., Boise	
Montana Medical Association	W. W. Andrus, Miles City	E. G. Balsam, Hart-Albin Bldg., Billings	Great Falls, July, 1922
Nevada State Medical Association	R. A. Bowdle, East Ely	Horace J. Brown, Goldfield	
New Mexico Medical Society	Chester Russell, Artesia	F. E. Tull, Albuquerque	
Oregon State Medical Association	Joseph A. Pettit, Portland	Raymond E. Watkins, Corbett Bldg., Portland	
Texas State Medical Association	T. J. Bennett, Austin	Holman Taylor, Texas State Bank Bldg., Ft. Worth	El Paso, May, 1922
Utah State Medical Association	R. R. Hampton, Salt Lake City	Wm. L. Rich, Boston Bldg., Salt Lake City	
Washington State Medical Assn.	A. E. Burns, Seattle	C. H. Thomson, Cobb Bldg., Seattle	
Wyoming State Medical Society	E. A. Kell, Rawlins	Earl Whedon, Sheridan	
Calif. Assn. of Med. Soc. Workers	Louise Morrow, San Francisco	Edna J. Shirpser, 3700 California St., San Francisco	Yosemite Park, May 15-18, 1922
California Assn. of Physiotherapists	Hazel Furchgott, San Francisco	Florence Atkinson, 29 Mosswood Road, Berkeley	Yosemite Park, May 15-18, 1922
California Assn. of Radiographers	F. McCormack, San Francisco	Leonard Frank, Physicians Bldg., San Francisco	Yosemite Park, May 15-18, 1922
California State Board of Health	G. E. Ebright, San Francisco	Walter M. Dickie, Sacramento	
California Board Med. Examiners	P. T. Phillips, Santa Cruz	Chas. B. Pinkham, Flood Bldg., San Francisco	
Anesthetists, Northern Cal. Assn. of	Mary Botsford, San Francisco	Dorothy A. Wood, 1390 7th Ave., San Francisco	Yosemite, May 15, 1922
Anesthetists, Southern Cal. Assn. of	W. R. Crane, Los Angeles	Eleanor Seymour, 308 Cons. Realty Bldg., Los Angeles	Yosemite, May 15, 1922
Anesthetists, Pacific Coast Assn. of	Geo. P. Waller, Los Angeles	Eleanor Seymour, 308 Cons. Realty Bldg., Los Angeles	Yosemite, May 15, 1922
Los Angeles Orthopedic Society		Alfred E. Gallant, Van Nuys Bldg., Los Angeles	
San Francisco Orthopedic Club	J. T. Watkins, San Francisco	H. H. Markel, Butler Bldg., San Francisco	
Pacific Coast Roentgen Ray Society	W. W. Watkins, Phoenix, Ariz.	Roy Payne, Portland, Ore.	Phoenix, Ariz., Dec. 1-3, 1921
Western Section of American Roentgen-Ray Society	Albert Soiland, Los Angeles	W. W. Watkins, Phoenix, Ariz.	With Pacific Coast Roentgen-Ray Soc., May or June, 1922
Medical and Surgical Assn. of the Southwest	M. K. Wylder, Albuquerque, N. M.	H. R. Carson, Goodrich Bldg., Phoenix, Ariz.	
Western Surgical Association	Chas. D. Lockwood, Pasadena	Warren A. Dennis, St. Paul, Minn.	St. Louis, Dec. 9-10, 1921
Southern Calif. Medical Assn.	Wm. Duffield, Auditorium Bldg., Los Angeles	Egerton Crispin, Los Angeles	San Diego, April 7-8, 1922

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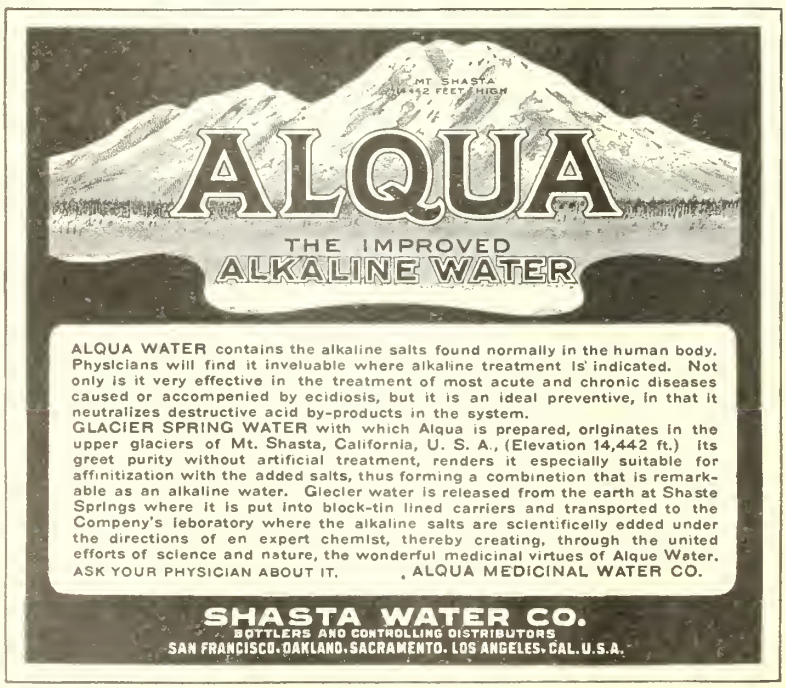

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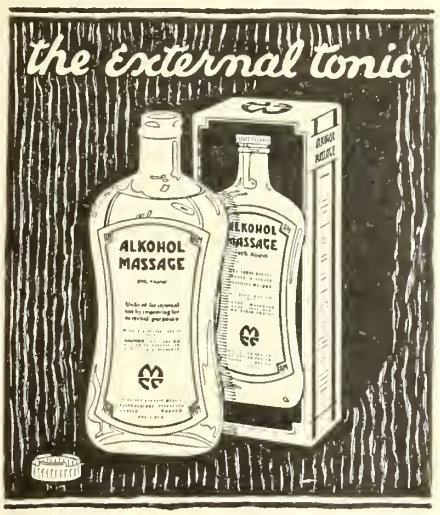

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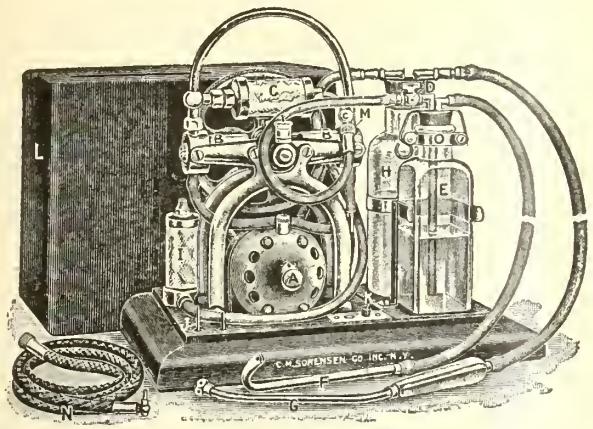

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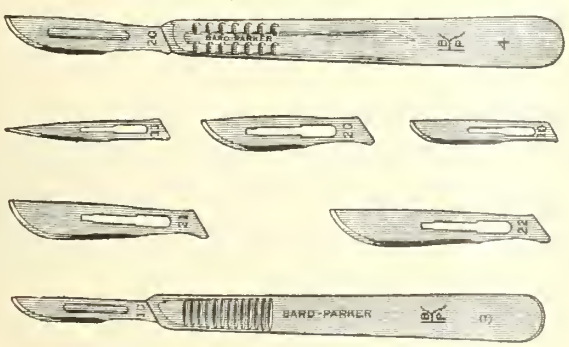

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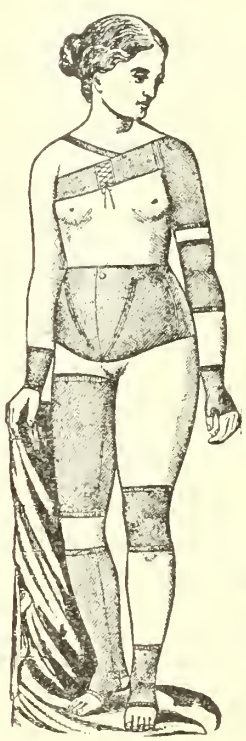

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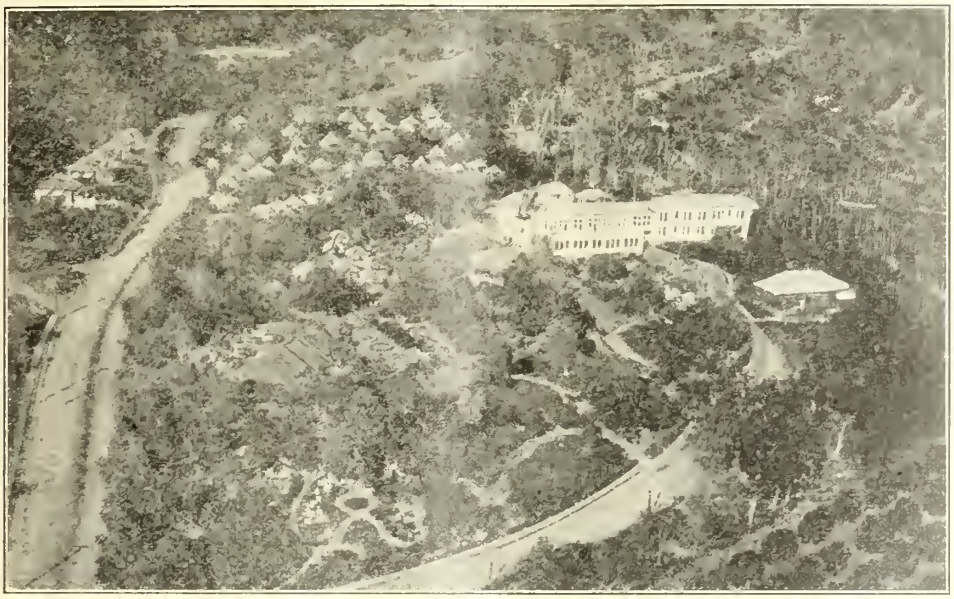

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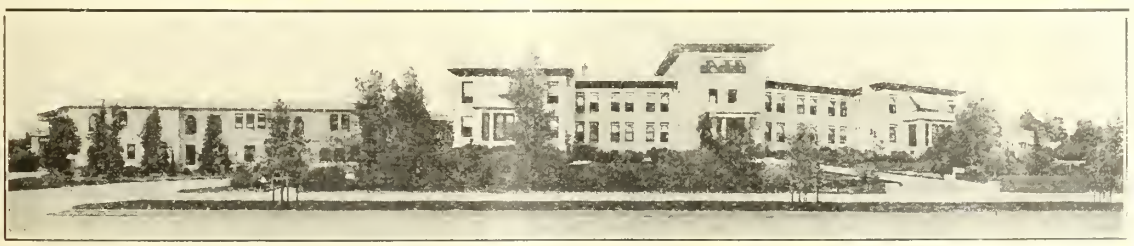

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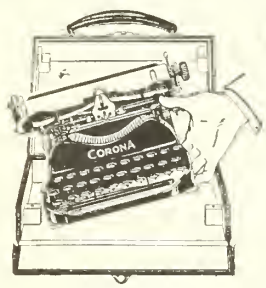

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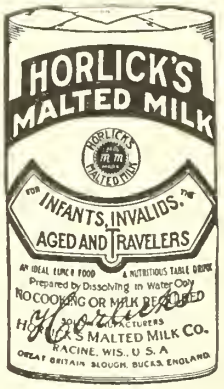

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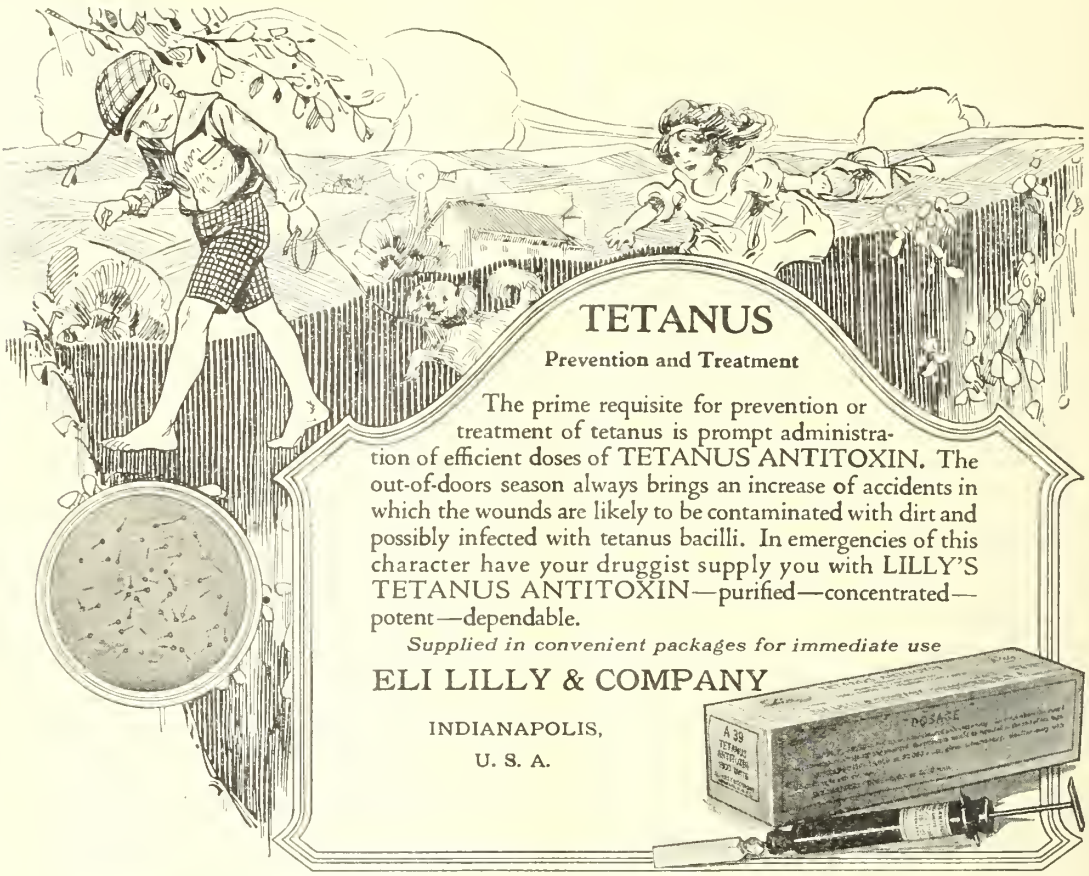

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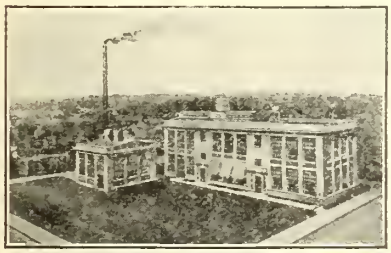

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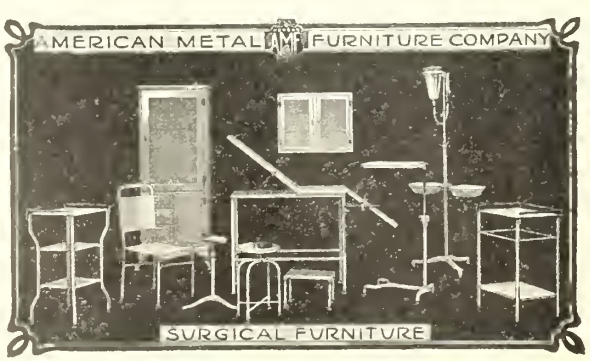

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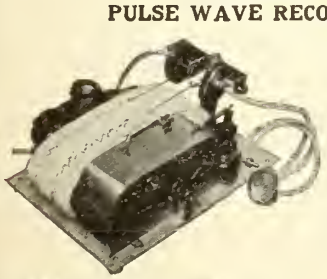

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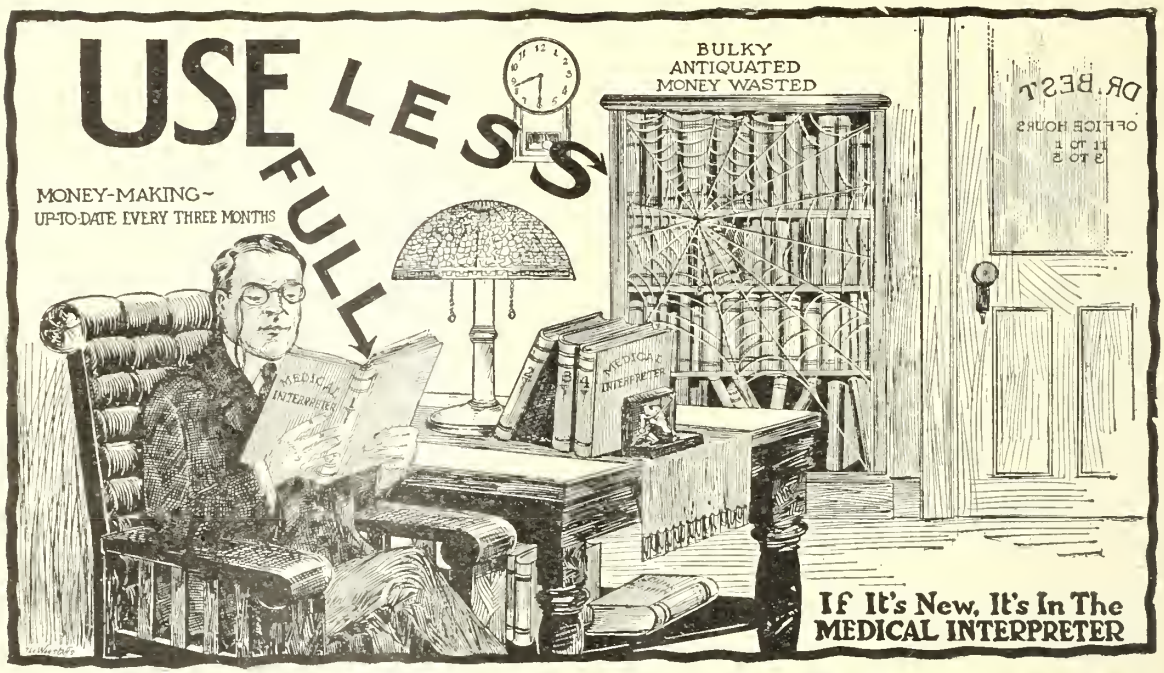

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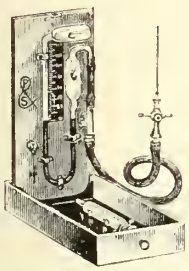

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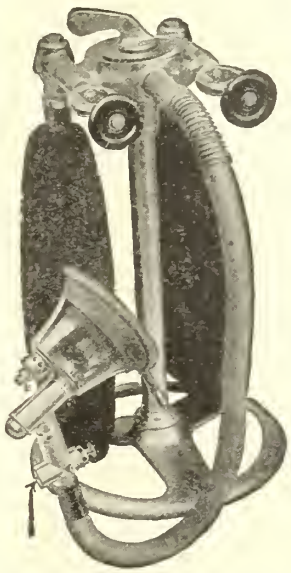

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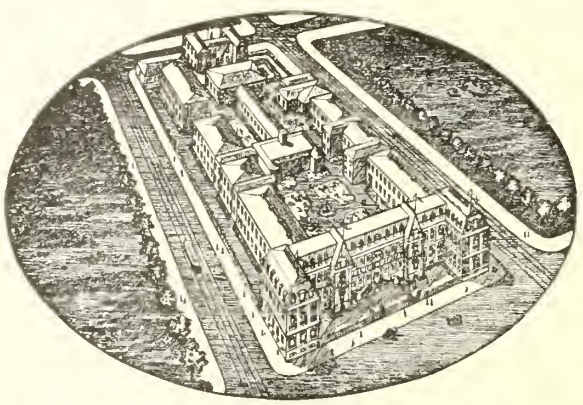

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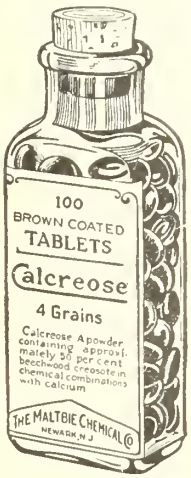

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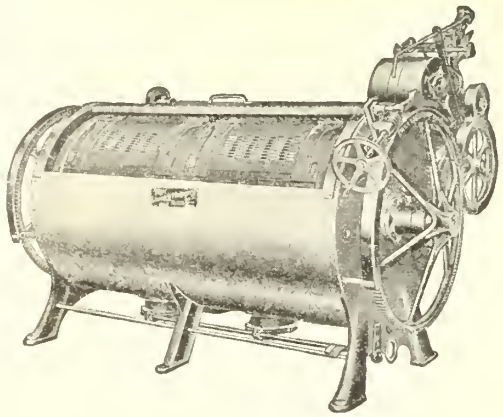

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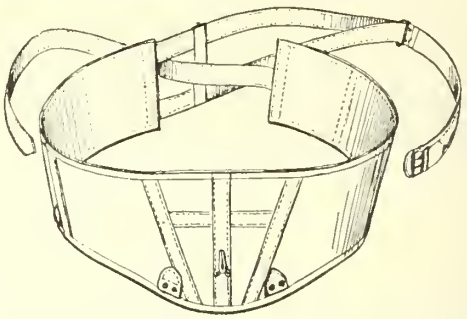

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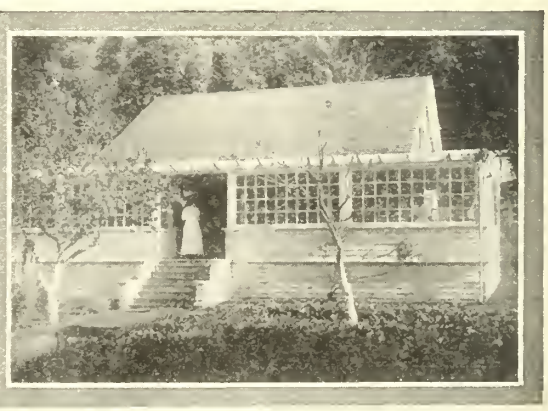

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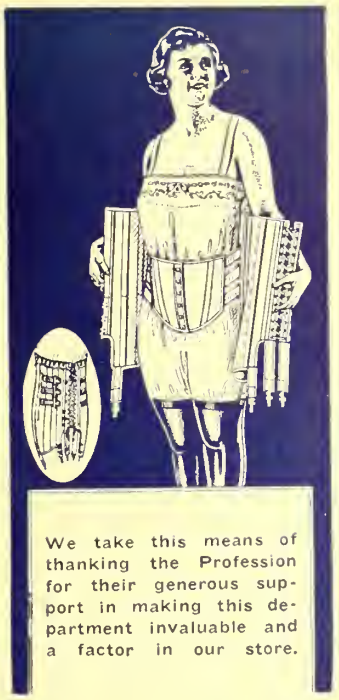

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" 'State medicine' is hereby defined for the purpose of this resolution to be any form of medical treatment, provided, conducted, controlled or subsidized by the federal or any state government, or municipality, excepting such service as is provided by the Army, Navy, or Public Health Service, and that which is necessary for the control of communicable diseases, the treatment of mental disease, the treatment of the indigent sick, and such other services as may be approved by and administered under the direction of or by a local county medical society, and are not disapproved by the state medical society of which it is a component part." (*Abstract from Minutes of the Seventy-third Annual Session of the A. M. A.*)

JULY · 1922

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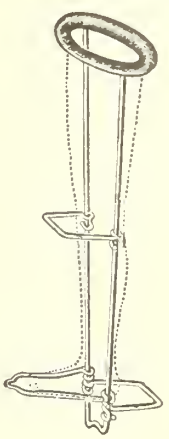

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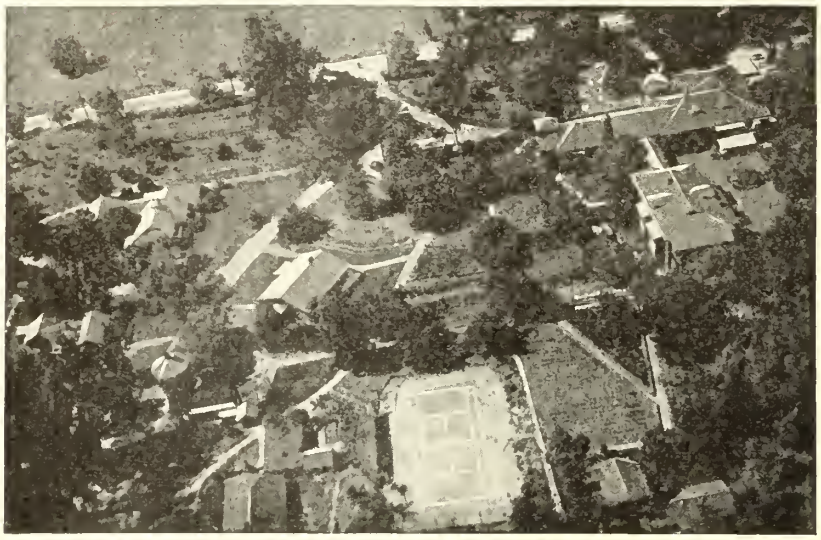

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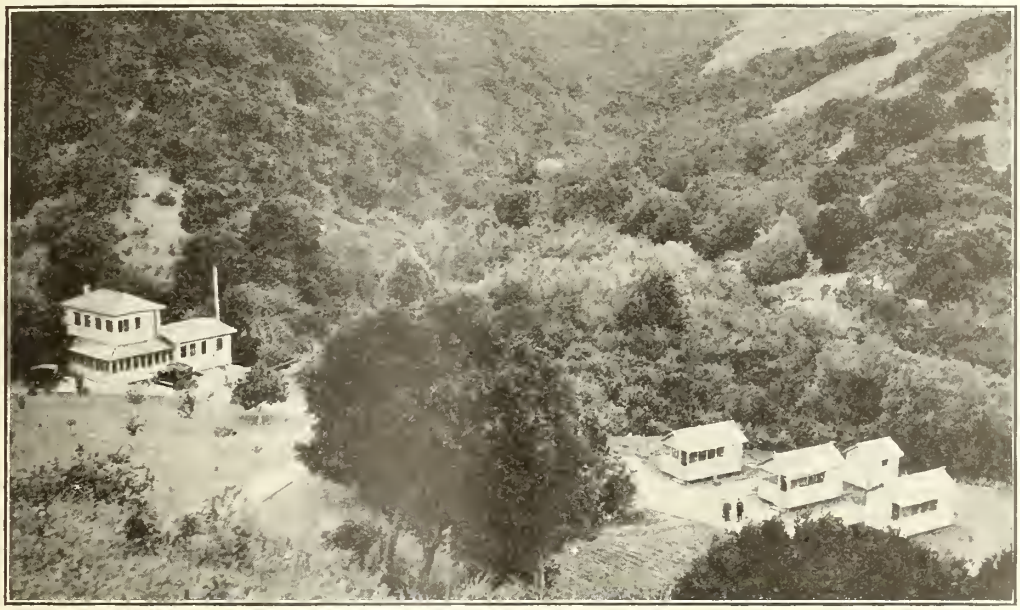

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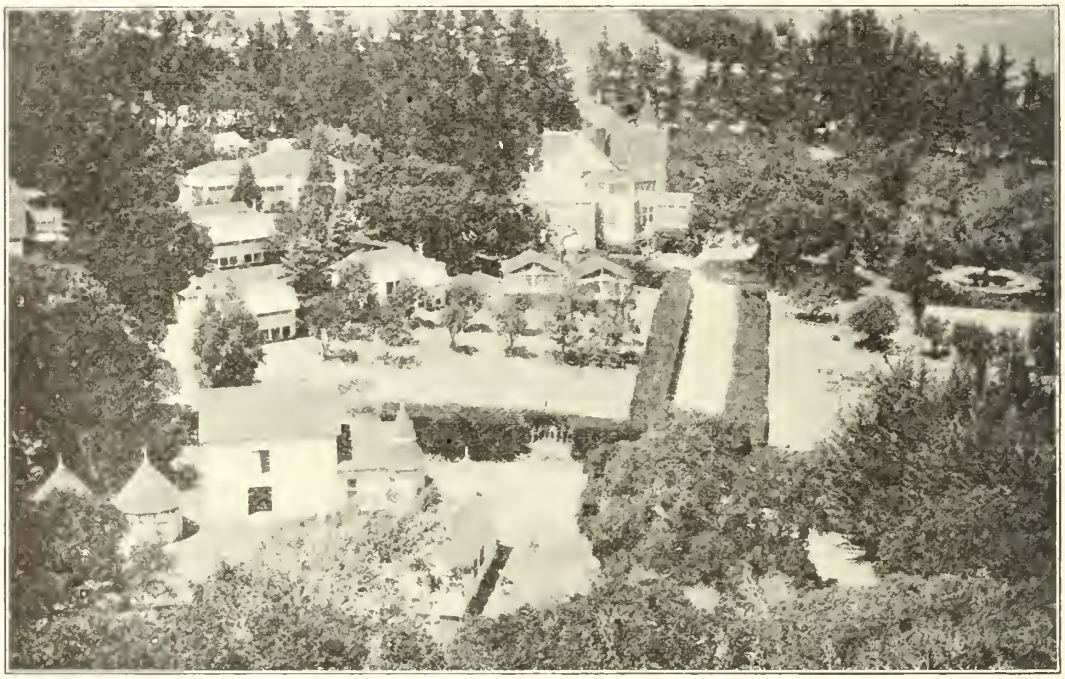

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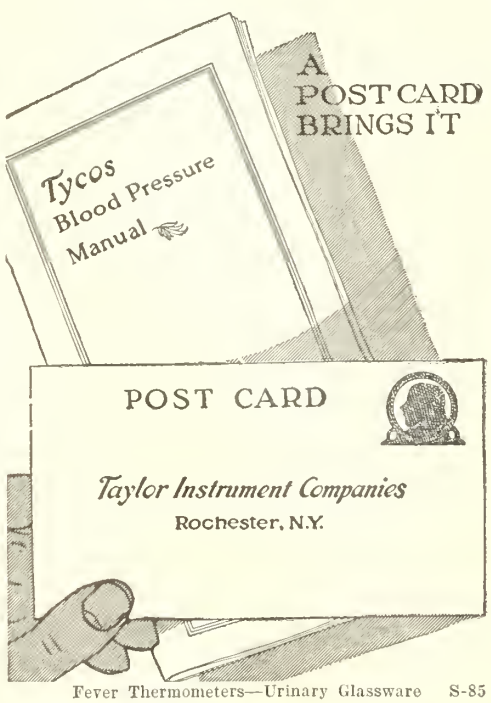

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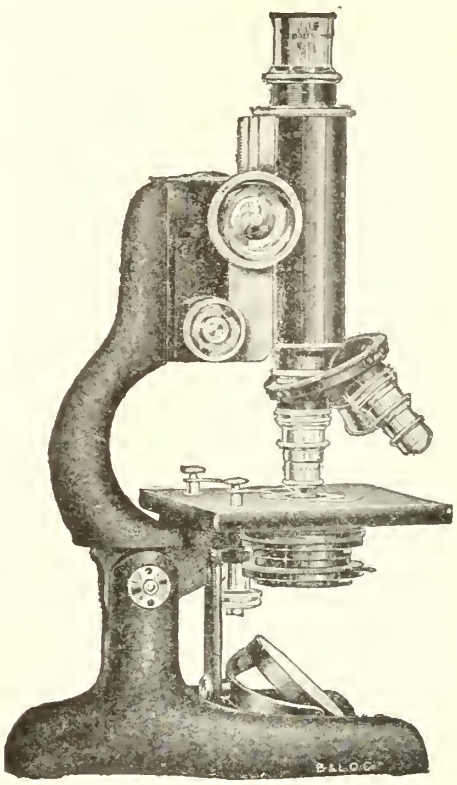

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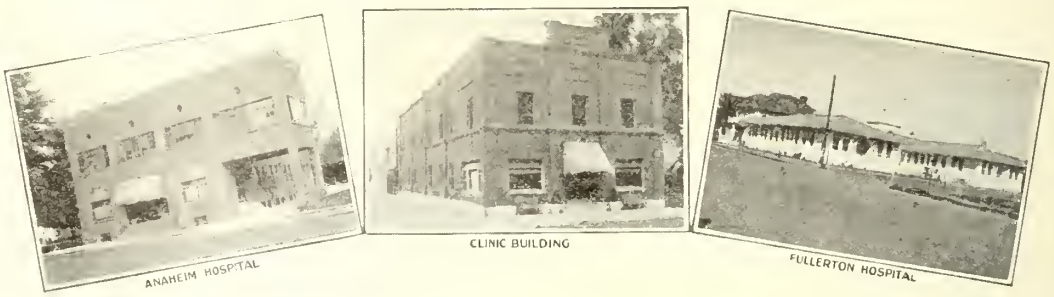

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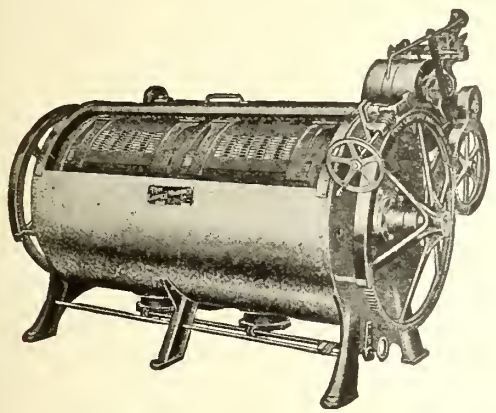

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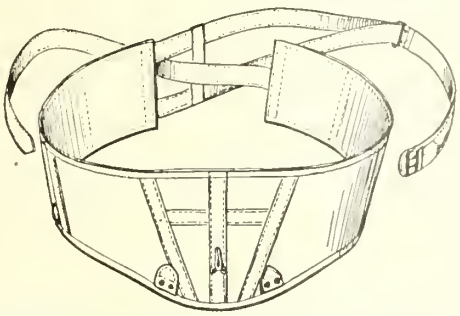

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LIST OF PRESIDENTS AND SECRETARIES OF COUNTY MEDICAL SOCIETIES

Counties.	President.	Secretary.	Meets.
Alameda County Medical Association	E. E. Brinkerhoff, Oakland	C. L. McVey, Oakland	3rd Monday.
Butte County Medical Society	P. F. Bullington	J. O. Chiapella, Chico	2d Thursday
Contra Costa County Medical Society	H. L. Carpenter, Richmond	L. St. John Hely, Richmond	Last Wednesday night.
Fresno County Medical Society	G. W. Walker, Fresno	Thos. F. Madden, Fresno	1st Tuesday.
Glenn County Medical Society	Etta S. Lund, Willows	C. L. Terrill, Willows	Bi-monthly.
Humboldt County Medical Society	J. C. Hadley, Arcata	L. A. Wing, Eureka	2d Tuesday.
Imperial County Medical Society	W. W. Apple, El Centro	Frances P. Elliott, El Centro	
Kern County Medical Society	Joe K. Smith, Bakersfield	P. J. Cuneo, East Bakersfield	3d Monday.
Lassen-Plumas County Medical Society	W. E. Dozier, Susanville	R. W. T. Garner, Susanville	
Los Angeles County Medical Society	Donald J. Frick, Los Angeles	Harlan Shoemaker Los Angeles	1st & 3d Thursday except July, Aug., Sept.
Madera County Medical Society	Dow H. Ransom, Madera	R. R. Dearborn, Madera	
Marin County Medical Society	J. H. Kuser, San Anselmo	C. A. De Lancey, San Quentin	2d Thursday each mo.
Mendocino County Medical Society	L. K. Van Allen, Ukiah	Paul J. Bowman, Fort Bragg	Monthly.
Merced County Medical Society	E. R. Fountain, Merced	Brett Davis, Merced	1st Thursday.
Monterey County Medical Society	Chas. T. Bullard, King City	T. C. Edwards, Salinas	1st Saturday.
Napa County Medical Society	Edward F. Donnelly, Napa	Otto T. Schulze, Napa	1st Tuesday.
Orange County Medical Association	J. H. Lang, Fullerton	W. C. Mayes, Santa Ana	1st Tuesday.
Placer County Medical Society	C. J. Durand, Colfax	R. A. Peers, Colfax	1st Sat. every 2d mo.
Riverside County Medical Society	Paul E. Simonds, Riverside	T. A. Card, Riverside	2d Monday.
Sacramento Society for Medical Improvement	G. P. Dillon, Sacramento	George J. Hall, Sacramento	3d Tuesday.
San Benito County Medical Society	L. C. Hull, Hollister	C. W. Merrill, Hollister	1st Monday.
San Bernardino Medical Association	L. M. Coy, San Bernardino	E. J. Eytinge, Redlands	1st Tuesday.
San Diego County Medical Society	W. W. Crawford, San Diego	G. B. Worthington, San Diego	2d and 4th Tuesdays.
San Francisco County Medical Society	Saxton Pope, San Francisco	Le Roy H. Briggs, S. F.	Every Tuesday.
San Joaquin County Medical Society	L. R. Johnson, Stockton	Dewey R. Powell, Stockton	4th Friday, except July and August.
San Luis Obispo County Medical Society	B. Y. Miller, San Luis Obispo	G. L. Sobey, Paso Robles	1st Saturday each mo.
San Mateo County Medical Society	C. V. Thompson, Pescadero	F. S. Gregory, Redwood City	1st Friday each month
Santa Barbara County Medical Ass'n	Wm. J. Mellinger, Santa Barbara	Alex C. Soper, Jr., Santa Barbara	2d Monday.
Santa Clara County Medical Society	Raymond Wayland, San Jose	E. P. Cook, San Jose	1st & 3d Wednesdays.
Santa Cruz County Medical Society	H. G. Watters, Watsonville	A. N. Nittler, Santa Cruz	1st Monday.
Shasta County Medical Society	A. B. Gilliland, Cottonwood	C. A. Mueller, Redding	Meets quarterly.
Siskiyou County Medical Society	J. R. Jones, Yreka	Robt. H. Heaney, Yreka	1st Monday each quar.
Solano County Medical Society	E. B. Todd, Vallejo	A. V. Doran, Vallejo	3d Wednesday.
Sonoma County Medical Society	J. W. Shipley, Cloverdale	N. R. H. Juell, Santa Rosa	1st Friday.
Stanislaus County	A. M. Field, Patterson	R. E. Maxwell, Modesto	2d Friday except July and August.
Tehama County Medical Society	F. H. Bly, Red Bluff	F. L. Doane, Red Bluff	1st Tuesday.
Tulare County Medical Society	A. W. Preston, Visalia	E. R. Zumwalt, Tulare	
Tuolumne County Medical Society	E. H. Reid, Tuolumne	W. L. Hood, Sonora	
Ventura County Medical Society	W. R. Livingston, Oxnard	Allen Peek, Santa Paula	Every two months.
Yolo County Society for Medical Improvement	W. E. Bates, Davis	Lela J. Beebe, Woodland	1st Tuesday, except July, Aug. and Sept.
Yuba-Sutter Counties Medical Society	Allen Gray, Marysville	A. L. Miller, Marysville	Meets every 2 months.

N. B.—Secretaries will please notify Journal office of any changes taking place in their respective counties.

DIRECTORY OF NATIONAL AND WESTERN MEDICAL AND HEALTH ORGANIZATIONS

Society	President	Secretary	Annual Meeting
American Medical Association	G. E. de Schweinitz, Phila.	Alexander R. Craig, 535 N. Dearborn St., Chicago, Ill.	
Arizona Medical Association	Albert L. Gustetter, Nogales	D. F. Harbridge, Goodrich Bldg., Phoenix	Prescott, 1922
California State Medical Society	Henry G. Brainerd, Los Ang.	W. E. Musgrave, Butler Bldg., San Francisco	San Francisco, June, 1923
League for Conservation of Public Health	Dudley Smith, Oakland	Celestine J. Sullivan, Butler Bldg., San Francisco	
Colorado State Medical Society	H. A. Smith, Delta	F. B. Stephenson, Metropolitan Bldg., Denver	
Idaho State Medical Society	H. W. Wilson, Twin Falls	E. E. Laubaugh, Overland Bldg., Boise	
Montana Medical Association	W. W. Andrus, Miles City	E. G. Balsam, Hart-Albin Bldg., Billings	
Nevada State Medical Association	R. A. Bowdle, East Ely	Horace J. Brown, Goldfield	Great Falls, July, 1922
New Mexico Medical Society	Chester Russell, Artesia	F. E. Tull, Albuquerque	
Oregon State Medical Association	Joseph A. Pettit, Portland	Raymond E. Watkins, Corbett Bldg., Portland	
Texas State Medical Association	T. J. Bennett, Austin	Holman Taylor, Texas State Bank Bldg., Ft. Worth	
Utah State Medical Association	R. R. Hampton, Salt Lake City	Wm. L. Rich, Boston Bldg., Salt Lake City	
Washington State Medical Assn.	A. E. Burns, Seattle	C. H. Thomson, Cobb Bldg., Seattle	
Wyoming State Medical Society	E. A. Kell, Rawlins	Earl Whedon, Sheridan	
Calif. Assn. of Med. Soc. Workers	Louise Morrow, San Francisco	Edna J. Shirpser, 3700 California St., San Francisco	
California Assn. of Physiotherapists	Hazel Furchgott, San Francisco	Florence Atkinson, 29 Mosswood Road, Berkeley	
California Assn. of Radiographers	F. McCormack, San Francisco	Leonard Frank, Physicians Bldg., San Francisco	
California State Board of Health	G. E. Ebright, San Francisco	Walter M. Dickie, Sacramento	
California Board Med. Examiners	P. T. Phillips, Santa Cruz	Chas. B. Pinkham, Flood Bldg., San Francisco	
Anesthetists, Northern Cal. Assn. of	Mary Botsford, San Francisco	Dorothy A. Wood, 1390 7th Ave., San Francisco	
Anesthetists, Southern Cal. Assn. of	W. R. Crane, Los Angeles	Eleanor Seymour, 308 Cons. Realty Bldg., Los Angeles	
Anesthetists, Pacific Coast Assn. of	Geo. P. Waller, Los Angeles	Eleanor Seymour, 308 Cons. Realty Bldg., Los Angeles	
Los Angeles Orthopedic Society		Alfred E. Gallant, Van Nuys Bldg., Los Angeles	
San Francisco Orthopedic Club	J. T. Watkins, San Francisco	H. H. Markel, Butler Bldg., San Francisco	
Pacific Coast Roentgen Ray Society	R. G. Taylor, Los Angeles	Roy Payne, Portland, Ore.	
Western Section of American Roentgen-Ray Society	Albert Soiland, Los Angeles	W. W. Watkins, Phoenix, Ariz.	
Medical and Surgical Assn. of the Southwest	M. K. Wylder, Albuquerque, N. M.	H. R. Carson, Goodrich Bldg., Phoenix, Ariz.	
Western Surgical Association	Chas. D. Lockwood, Pasadena	Warren A. Dennis, St. Paul, Minn.	
Southern Calif. Medical Assn.	Wm. Duffield, Auditorium Bldg., Los Angeles	Egerton Crispin, Los Angeles	

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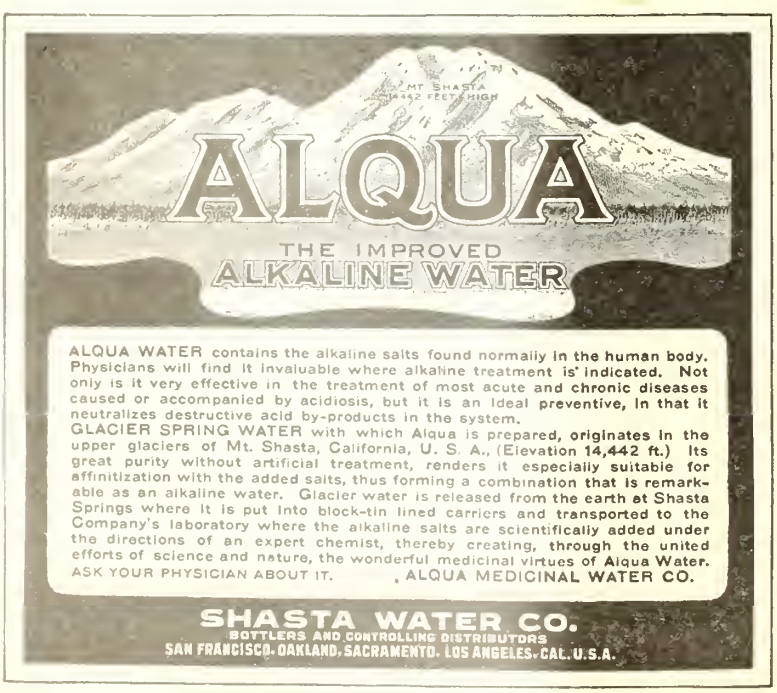

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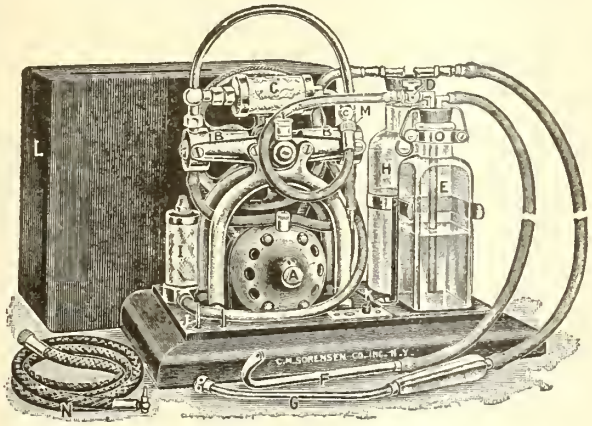

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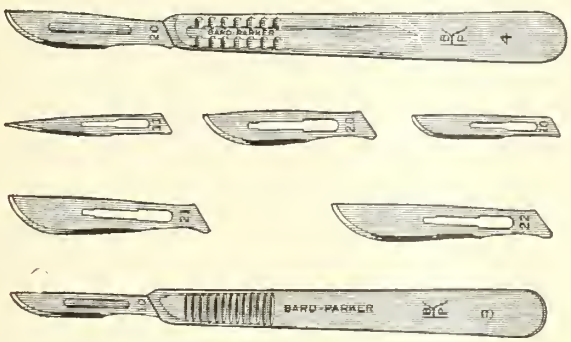

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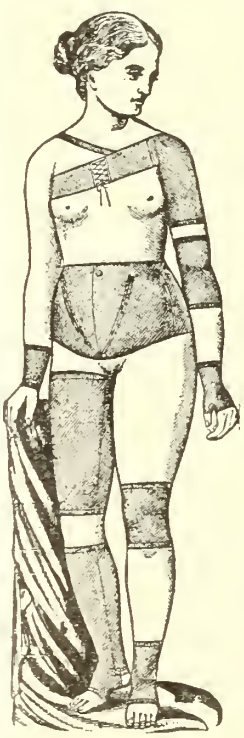

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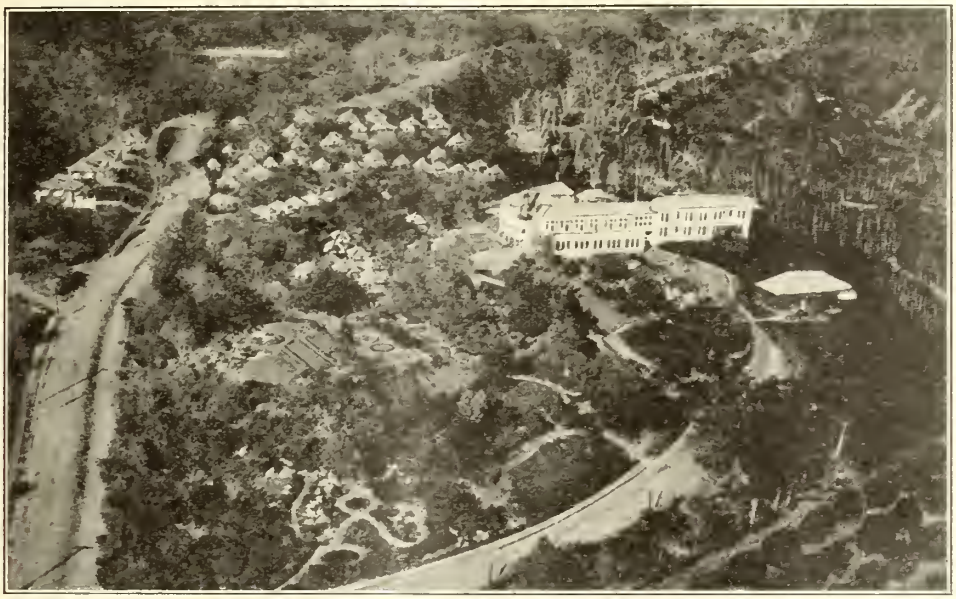

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Court Decision Relating to Physicians' Fees Under Workmen's Compensation Acts—Appellate Courts of New York, Wisconsin, and Illinois have recently rendered decisions of great importance to physicians rendering services under the provisions of Workmen's Compensation Acts.

The decisions of these courts of three different States with different laws were upon similar points, and the decisions are uniformly important and gratifying to physicians.

The point at issue was whether or not the Industrial Accident Commission had the power to fix a fee schedule for medical services that would be binding upon all physicians; and that a physician could not collect from insurance companies and carriers in accordance with a fee schedule adopted by the State Medical Society when this fee differed from that approved by the Industrial Accident Commission.

The Workmen's Compensation Acts of all of these States provide, in effect, that the "Commission shall have the power to fix the amount of fee for any person performing services under the provisions of the Act."

Mr. Justice Matchett delivered the opinion in the Illinois case. Justices Dever and McSurely concurring.

The opinion in part states:

"The theory on which our Compensation law is based is that the parties to whom it applies, the employer and his employes, must voluntarily elect to come under its provisions. It is only when they have so elected that the Act deprives the courts of their jurisdiction to enforce contractual terms between them. The manner in which they shall come under the Act is distinctly provided for, but there is no provision in the Act by which physicians may voluntarily come under its provisions. In Noer v. Jones Lumber Co. (Wis.), 175 N. W. Rep., p. 784, where a similar question arose under the Wisconsin statute, the Court said:

" 'The Working Men's Compensation Act deals exclusively with matters growing out of the relation of employer and employe: the provisions of the Act are binding upon employers and employes electing to be bound by them, and upon none others; all except employers and employes are strangers to the Act, and their usual lawful rights and remedies are unaffected by it.'

"To the same effect is National Car Co. v. Sullivan, 126 N. E. 494."

The importance and far-reaching possibilities of these decisions are very great. The principle enunciated, if wisely used, will not only restore to the medical profession some of their rights in connection with the Workmen's Compensation Act, but will furnish physicians with a formidable weapon in controlling other attempts to make health the football of politics, and the physician the hireling of the "ins" of a paternalistic government.

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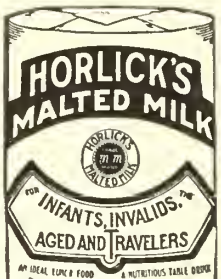

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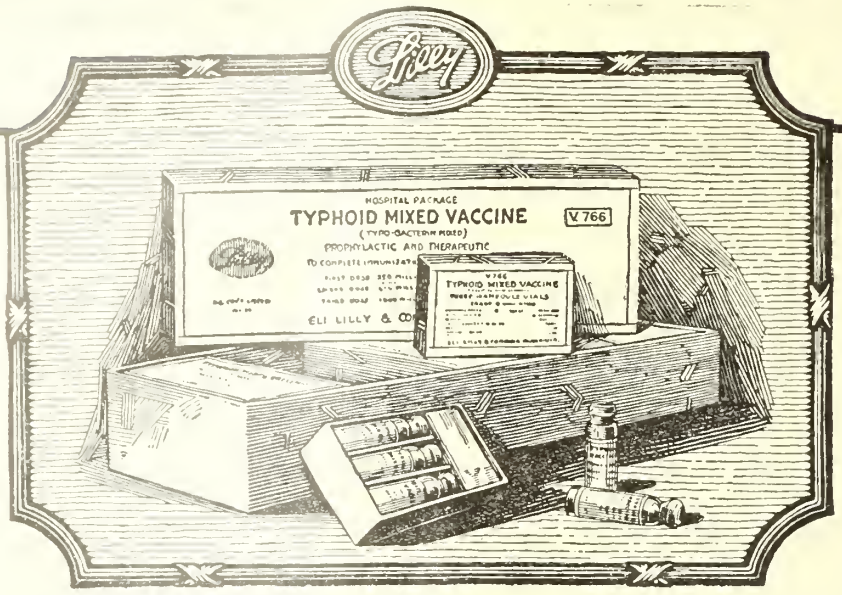

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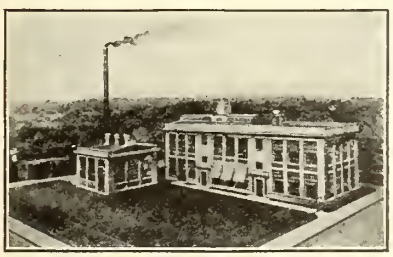

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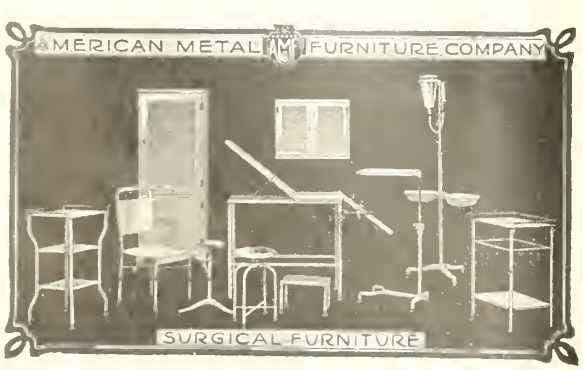

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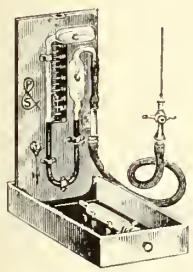

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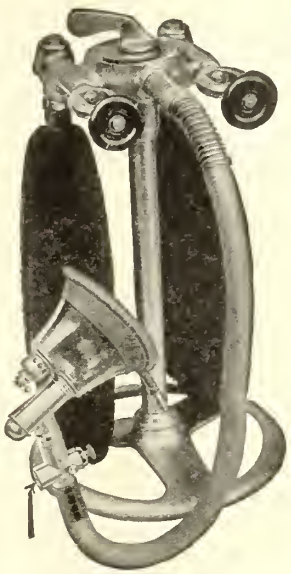

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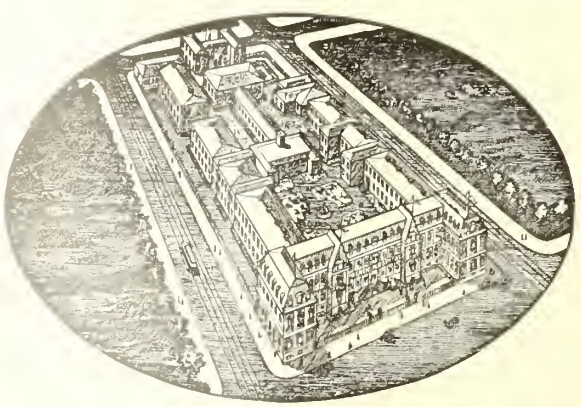

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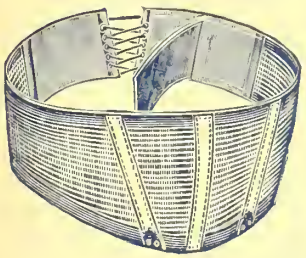

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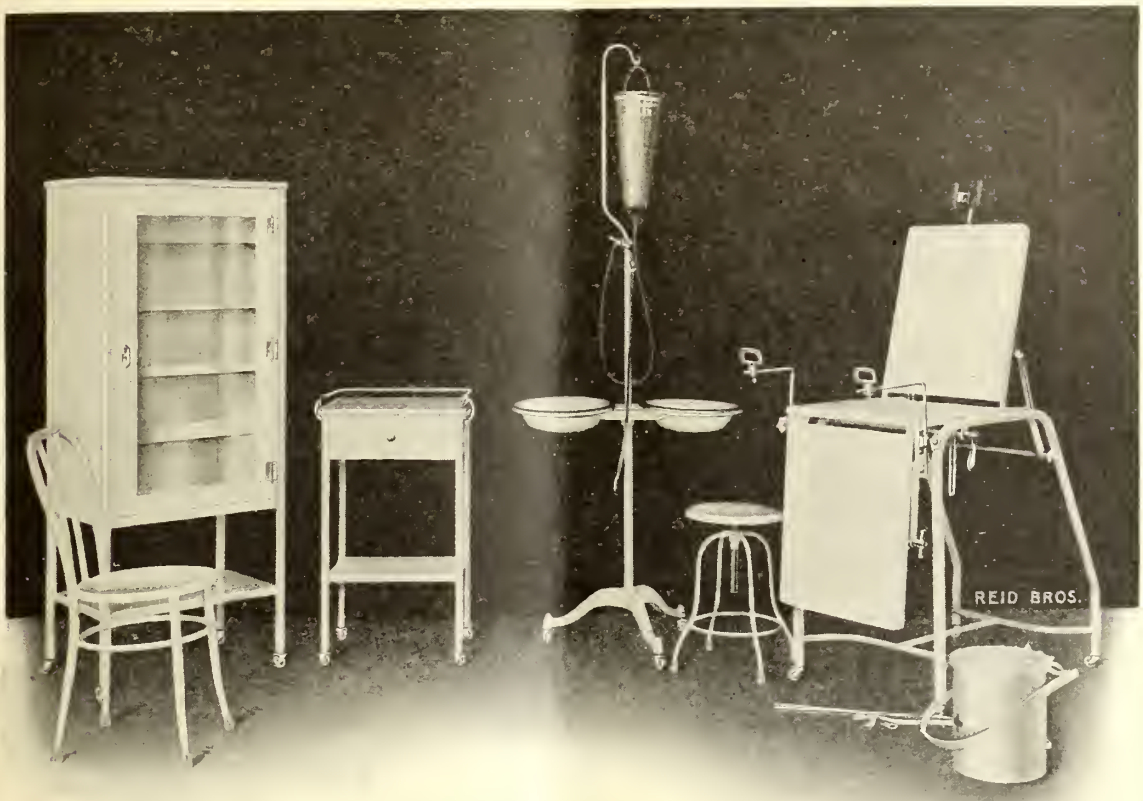

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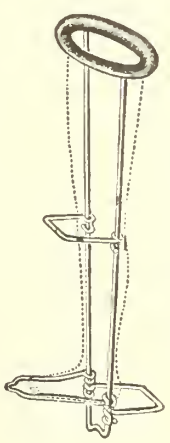

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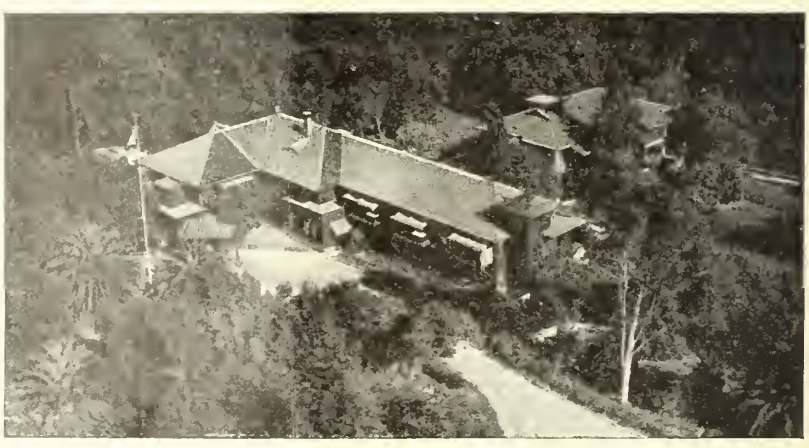

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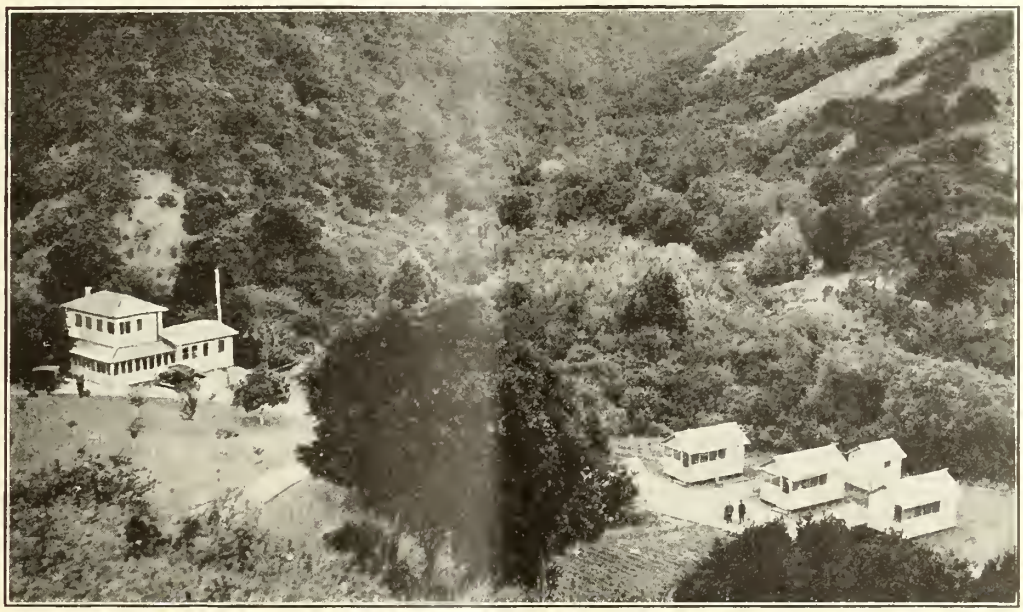

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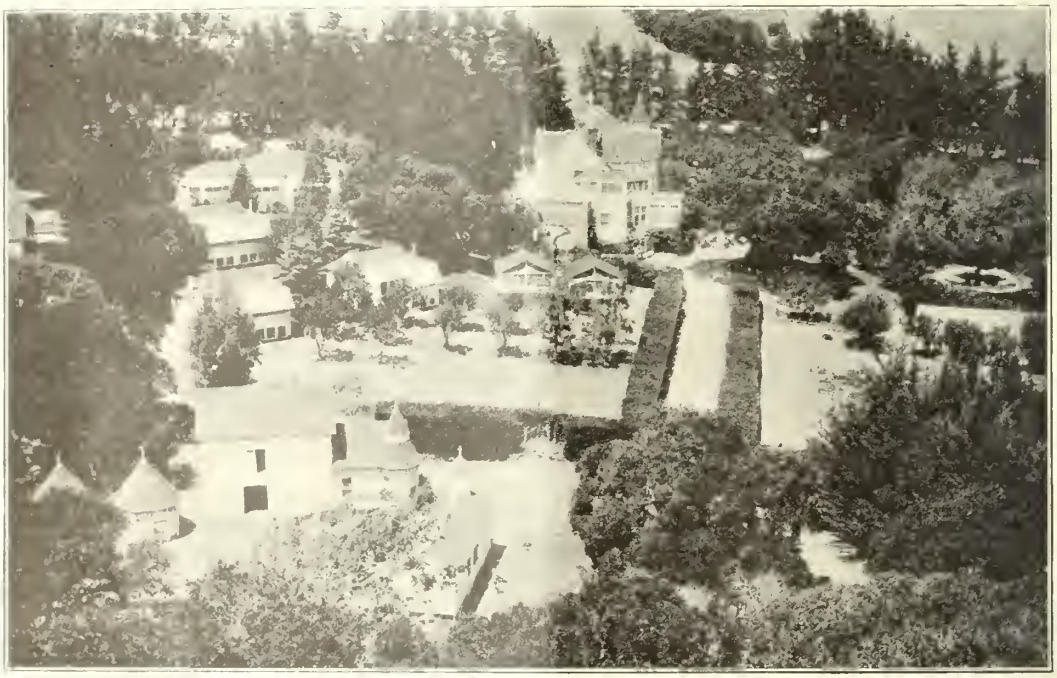

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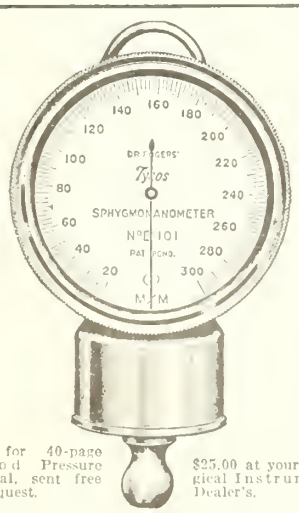

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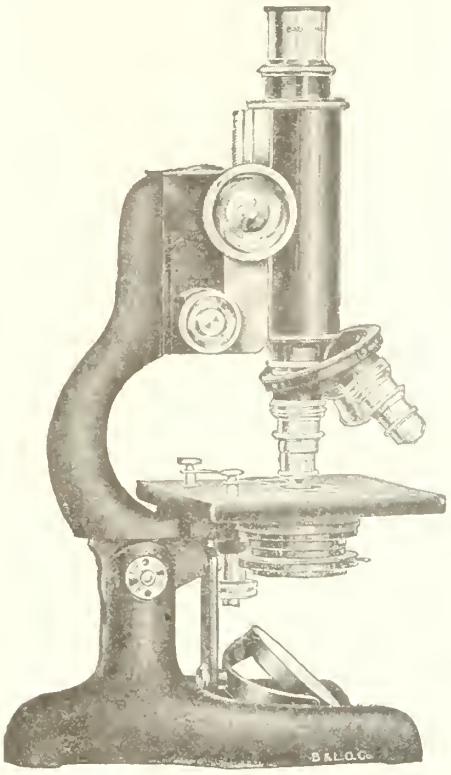

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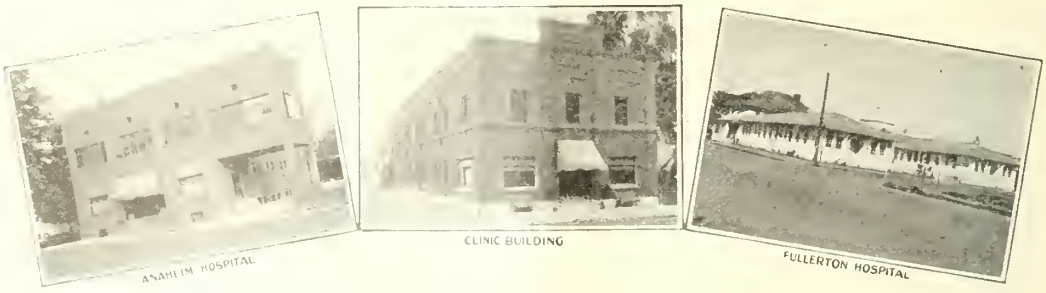

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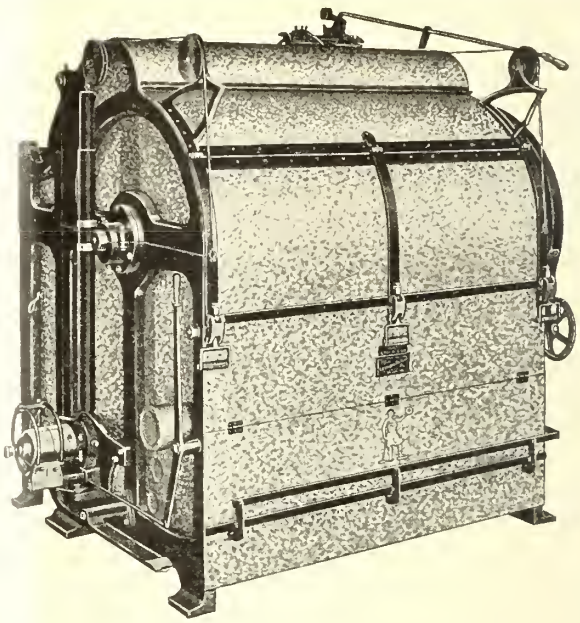

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Resolution on Medical Education—(Abstract)—"It is further believed that the plan of some of the great foundations to require full-time clinical professorships is not wise and does not receive the support of the general profession. Your committee doubts the wisdom of making the adoption of such a plan a condition of endowment.

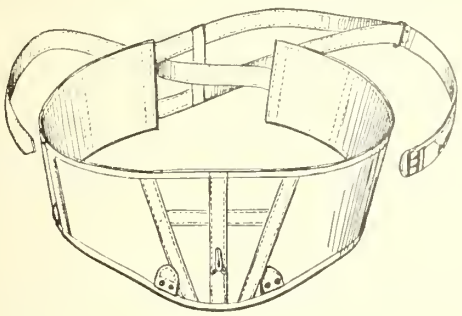
"The tendency toward premature or over-rapid specialization is deplored. The practice of entering a special field without the proper preliminary general and special training should be checked. It is urged that medical schools so revise their curriculums as to provide a thorough training for the general practice of medicine, leaving courses in the specialties for the graduate medical school.

"As a means to correct in part the faulty distribution of physicians, as between urban and rural districts, your committee subscribes to the plan of the Council for the establishment of hospitals in all communities having sufficient population in the surrounding territory to support them; these institutions are to be under the direct control of the medical profession. It, furthermore, regards the improvement of public highways as an additional aid in providing physicians for many districts which at present do not have them.

"Your committee agrees with the views of the Council that the curriculums of medical schools should be recognized so that the study of anatomy, pathology and the other fundamental sciences may be illustrative of clinical medicine and surgery, instead of treating those sciences as entirely separate from the latter. The committee believes, as does the Council, that the study of clinical cases should begin with the first year of medical training and be carried on concomitantly with the study of the fundamental sciences, so that each group will illustrate the other.

"Your committee shares the view of the Council that there are certain obstacles in the development of a medical school as the medical department of a university. It has become clear that a medical school cannot be developed along the same comparatively narrow lines as the ordinary department of science in the university. Medicine has become one of the greatest functions of modern civilization, and has an intimate, everyday contact with every individual of the community, and the proper plan of organization must recognize this fact, and be sufficiently broad to maintain this relationship between the medical school, the medical profession and the community. The functions of medicine are performed by specially trained men and women—the medical profession. Any plan for the successful development of our medical schools must receive the active and enthusiastic co-operation of the medical profession. The medical school with its teachers and its associated agencies, hospitals, dispensaries, etc., cannot be developed simply as a university affair. It has definite and important functions to perform which are vital to the community, and a sound plan of organization must be one in which all of the agencies retain their normal place and perform their normal function. It is especially important that the teachers in the clinical departments retain their usual relationship to the medical profession."—Abstract from Minutes of the Seventy-Third Annual Session of the A. M. A.

Resolution Directing a Survey of the Nursing Situation—"Your committee approves the speaker's recommendation for a survey of the nursing institutions, and recommends its reference to the Council on Medical Education and Hospitals. They, if they deem it advisable, may submit this to a sub-committee. We recommend that a report be received from this Council on the subject at the next annual session."—Abstract from Minutes of the Seventy-Third Annual Session of the A. M. A.



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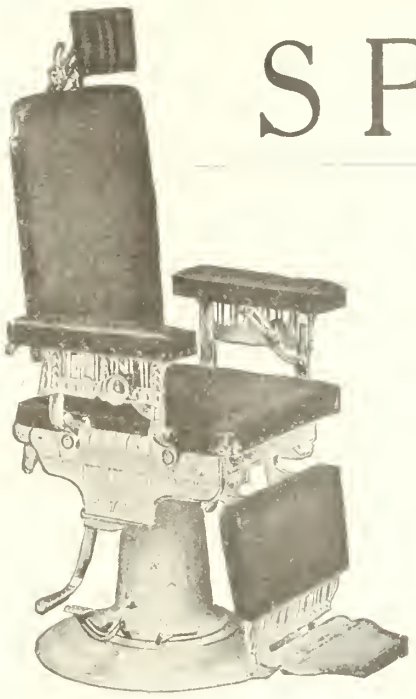
LIST OF PRESIDENTS AND SECRETARIES OF COUNTY MEDICAL SOCIETIES

Counties.	President.	Secretary.	Meets.
Alameda County Medical Association	E. E. Brinkerhoff, Oakland	C. L. McVey, Oakland	3rd Monday.
Butte County Medical Society	P. F. Bullington	J. O. Chiapella, Chico	2d Thursday
Contra Costa County Medical Society	H. L. Carpenter, Richmond	L. St. John Heiy, Richmond	Last Wednesday night.
Fresno County Medical Society	G. W. Walker, Fresno	Thos. F. Madden, Fresno	1st Tuesday.
Glenn County Medical Society	Etta S. Lund, Willows	C. L. Terrill, Willows	Bi-monthly.
Humboldt County Medical Society	J. C. Hadley, Arcata	L. A. Wing, Eureka	2d Tuesday.
Imperial County Medical Society	W. W. Apple, El Centro	Frances P. Elliott, El Centro	
Kern County Medical Society	Joe K. Smith, Bakersfield	P. J. Cuneo, East Bakersfield	3d Monday.
Lassen-Plumas County Medical Society	W. E. Dozier, Susanville	R. W. T. Garner, Susanville	
Los Angeles County Medical Society	Donald J. Frick, Los Angeles	Harlan Shoemaker Los Angeles	1st & 3d Thursday except July, Aug., Sept.
Madera County Medical Society	Dow H. Ransom, Madera	R. R. Dearborn, Madera	
Marin County Medical Society	J. H. Kuser, San Anselmo	C. A. De Lancey, San Quentin	2d Thursday each mo.
Mendocino County Medical Society	L. K. Van Allen, Ukiah	Paul J. Bowman, Fort Bragg	Monthly.
Merced County Medical Society	E. R. Fountain, Merced	Brett Davis, Merced	1st Thursday.
Monterey County Medical Society	Chas. T. Bullard, King City	T. C. Edwards, Salinas	1st Saturday.
Napa County Medical Society	Edward F. Donnelly, Napa	Otto T. Schulze, Napa	1st Tuesday.
Orange County Medical Association	Jas. C. Crawford, Orange	Rowland P. Neagle, Santa Ana	1st Tuesday.
Placer County Medical Society	C. J. Durand, Colfax	R. A. Peers, Colfax	1st Sat. every 2d mo.
Riverside County Medical Society	Paul E. Simonds, Riverside	T. A. Card, Riverside	2d Monday.
Sacramento Society for Medical Improvement	G. P. Dillon, Sacramento	George J. Hall, Sacramento	3d Tuesday.
San Benito County Medical Society	L. C. Hull, Hollister	C. W. Merrill, Hollister	1st Monday.
San Bernardino Medical Association	L. M. Coy, San Bernardino	E. J. Eytinge, Redlands	1st Tuesday.
San Diego County Medical Society	W. W. Crawford, San Diego	G. B. Worthington, San Diego	2d and 4th Tuesdays.
San Francisco County Medical Society	Saxton Pope, San Francisco	Le Roy H. Briggs, S. F.	Every Tuesday.
San Joaquin County Medical Society	L. R. Johnson, Stockton	Dewey R. Powell, Stockton	4th Friday, except July and August.
San Luis Obispo County Medical Society	B. Y. Miller, San Luis Obispo	G. L. Sobey, Paso Robles	1st Saturday each mo.
San Mateo County Medical Society	C. V. Thompson, Pescadero	F. S. Gregory, Redwood City	1st Friday each month
Santa Barbara County Medical Ass'n	Wm. J. Mellinger, Santa Barbara	Alex C. Soper, Jr., Santa Barbara	2d Monday.
Santa Clara County Medical Society	Raymond Wayland, San Jose	E. P. Cook, San Jose	1st & 3d Wednesdays.
Santa Cruz County Medical Society	H. G. Watters, Watsonville	A. N. Nittler, Santa Cruz	1st Monday.
Shasta County Medical Society	A. B. Gilliland, Cottonwood	C. A. Mueller, Redding	Meets quarterly.
Siskiyou County Medical Society	J. R. Jones, Yreka	Robt. H. Heaney, Yreka	1st Monday each quar.
Solano County Medical Society	E. B. Todd, Vallejo	A. V. Doran, Vallejo	3d Wednesday.
Sonoma County Medical Society	J. W. Shipley, Cloverdale	N. R. H. Jueli, Santa Rosa	1st Friday.
Stanislaus County	A. M. Field, Patterson	R. E. Maxwell, Modesto	2d Friday except July and August.
Tehama County Medical Society	F. H. Bly, Red Bluff	F. L. Doane, Red Bluff	1st Tuesday.
Tulare County Medical Society	A. W. Preston, Visalia	E. R. Zumwalt, Tulare	
Tuolumne County Medical Society	E. H. Reid, Tuolumne	W. L. Hood, Sonora	
Ventura County Medical Society	W. R. Livingston, Oxnard	Allen Peek, Santa Paula	Every two months.
Yolo County Society for Medical Improvement	W. E. Bates, Davis	Leia J. Beebe, Woodland	1st Tuesday, except July, Aug. and Sept.
Yuba-Sutter Counties Medical Society	Allen Gray, Marysville	A. L. Miller, Marysville	Meets every 2 months.

N. B.—Secretaries will please notify Journal office of any changes taking place in their respective counties.

DIRECTORY OF NATIONAL AND WESTERN MEDICAL AND HEALTH ORGANIZATIONS

Society	President	Secretary	Annual Meeting
American Medical Association	G. E. de Schweinitz, Phila.	Alexander R. Craig, 535 N. Dearborn St., Chicago, Ill.	
Arizona Medical Association	Albert L. Gustetter, Nogales	D. F. Harbridge, Goodrich Bldg., Phoenix	Prescott, 1922
California State Medical Society	Henry G. Brainerd, Los Ang.	W. E. Musgrave, Butler Bldg., San Francisco	San Francisco, June, 1923
League for Conservation of Public Health	Dudley Smith, Oakland	Celestine J. Sullivan, Butler Bldg., San Francisco	
Colorado State Medical Society	H. A. Smith, Delta	F. B. Stephenson, Metropolitan Bldg., Denver	
Idaho State Medical Society	H. W. Wilson, Twin Falls	E. E. Laubaugh, Overland Bldg., Boise	
Montana Medical Association	W. W. Andrus, Miles City	E. G. Balsam, Hart-Albin Bldg., Billings	Great Falls, July, 1922
Nevada State Medical Association	R. A. Bowdie, East Ely	Horace J. Brown, Goldfield	
New Mexico Medical Society	Chester Russell, Artesia	F. E. Tuli, Albuquerque	
Oregon State Medical Association	Joseph A. Pettit, Portland	Raymond E. Watkins, Corbett Bldg., Portland	
Texas State Medical Association	T. J. Bennett, Austin	Holman Taylor, Texas State Bank Bldg., Ft. Worth	
Utah State Medical Association	R. R. Hampton, Salt Lake City.	Wm. L. Rich, Boston Bldg., Salt Lake City	
Washington State Medical Assn	A. E. Burns, Seattle	C. H. Thomson, Cobb Bldg., Seattle	
Wyoming State Medical Society	E. A. Kell, Rawlins	Earl Whedon, Sheridan	
Calif. Assn. of Med. Soc. Workers	Louise Morrow, San Francisco	Edna J. Shirpser, 3700 California St., San Francisco	
California Assn. of Physiotherapists	Hazel Furchgott, San Francisco	Florence Atkinson, 29 Mosswood Road, Berkeley	
California Assn. of Radiographers	F. McCormack, San Francisco	Leonard Frank, Physicians Bldg., San Francisco	
California State Board of Health	G. E. Ebright, San Francisco	Walter M. Dickie, Sacramento	
California Board Med. Examiners	P. T. Phillips, Santa Cruz	Chas. B. Pinkham, Flood Bldg., San Francisco	
Anesthetists, Northern Cal. Assn. of	Mary Botsford, San Francisco	Dorothy A. Wood, 1390 7th Ave., San Francisco	
Anesthetists, Southern Cal. Assn. of	W. R. Crane, Los Angeles	Eleanor Seymour, 308 Cons. Realty Bldg., Los Angeles	
Anesthetists, Pacific Coast Assn. of	Geo. P. Waller, Los Angeles	Eleanor Seymour, 308 Cons. Realty Bldg., Los Angeles	
Los Angeles Orthopedic Society		Alfred E. Gallant, Van Nuys Bldg., Los Angeles	
San Francisco Orthopedic Club	J. T. Watkins, San Francisco	H. H. Markel, Butler Bldg., San Francisco	
Pacific Coast Roentgen Ray Society	R. G. Taylor, Los Angeles	Roy Payne, Portland, Ore.	
Western Section of American Roentgen-Ray Society	Albert Soiland, Los Angeles	W. W. Watkins, Phoenix, Ariz.	
Medical and Surgical Assn. of the Southwest	M. K. Wylder, Albuquerque, N. M.	H. R. Carson, Goodrich Bldg., Phoenix, Ariz.	
Western Surgical Association	Chas. D. Lockwood, Pasadena	Warren A. Dennis, St. Paul, Minn.	
Southern Calif. Medical Assn.	Wm. Duffield, Auditorium Bldg., Los Angeles	Egerton Crispin, Los Angeles	



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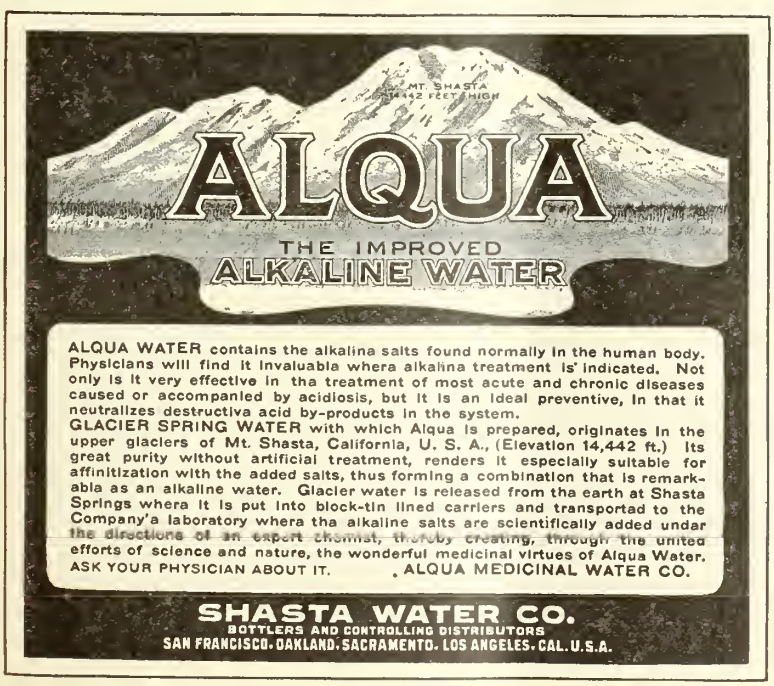

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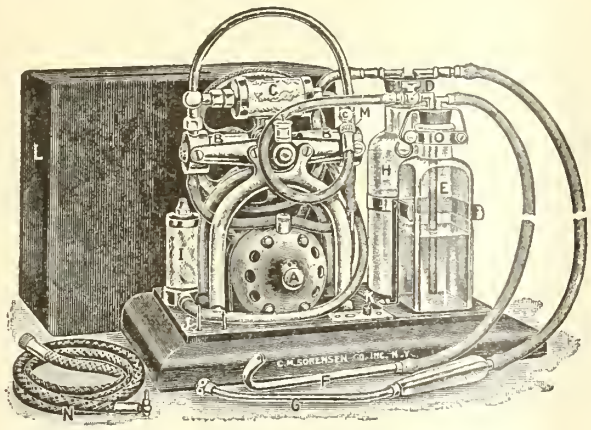

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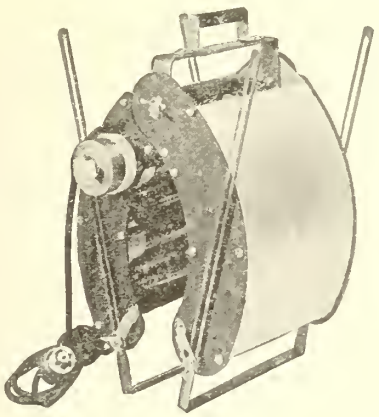

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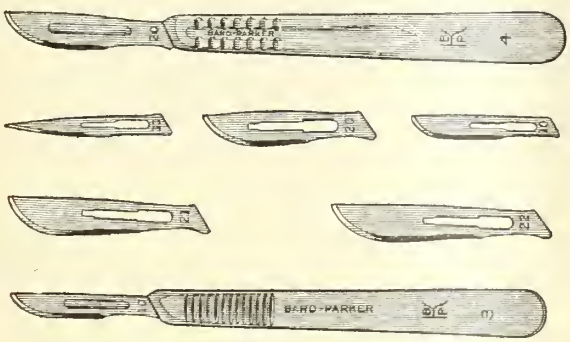

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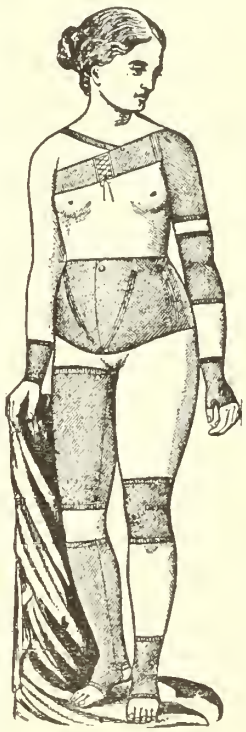

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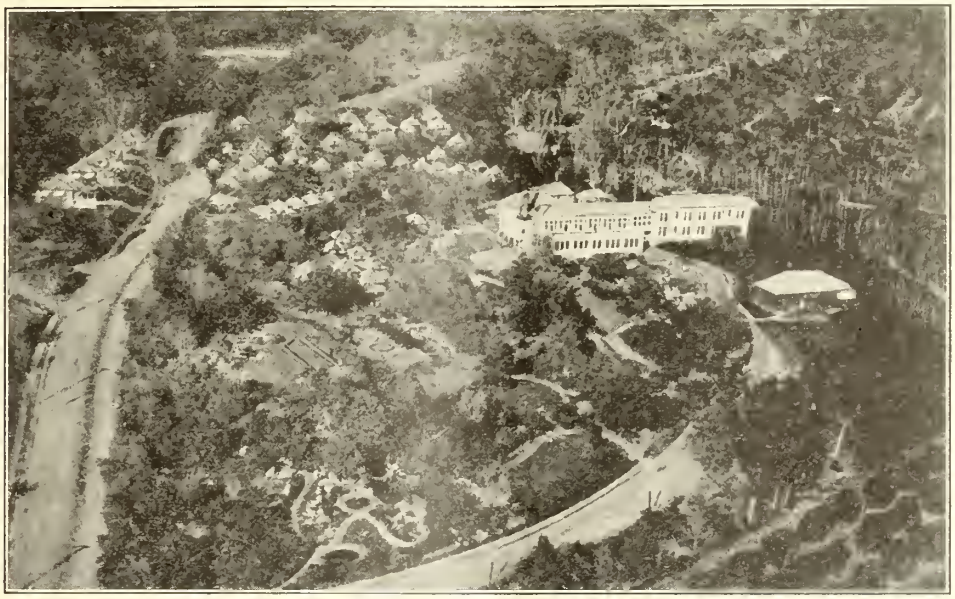

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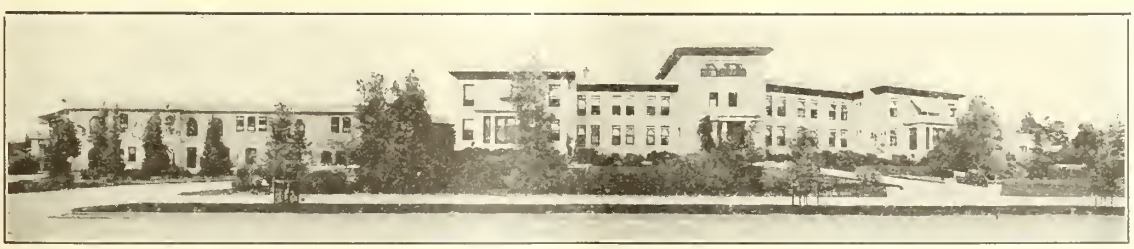

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Resolution on Volstead Act.—Abstract from Minutes of the Seventy-Third Annual Session of the A. M. A.:

"Whereas, The medical profession has been subjected to criticism and unfavorable comment because of present conditions associated with the enforcement of the Volstead Law, and

"Whereas, The results of a referendum conducted by the Journal of the American Medical Association, covering 54,000 physicians, indicates that 51 per cent of physicians consider whisky 'necessary' in the practice of medicine, and

"Whereas, The dosage, method, frequency and duration of administration of this drug in any given case is a problem of scientific therapeutics and is not to be determined by legal or arbitrary dictum, and

"Whereas, The experience of physicians, as reported in the Journal, indicates that the present method of control, limitation of quantity and frequency of administration, licensure and supply of a satisfactory product constitutes a serious interference with the practice of medicine by those physicians who are convinced of the value of alcohol in medical practice, therefore be it

"Resolved, That the House of Delegates of the American Medical Association, in convention assembled, representing a membership of over 89,000 physicians, appeals to the Secretary of the Treasury and to the Congress of the United States for relief from the present unsatisfactory conditions, and recommends that provisions be made for supplying bonded whisky, for **medicinal use only,** at a fixed retail price to be established by the Government."

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CONTRIBUTIONS

EXCLUSIVE PUBLICATION—Articles are accepted for publication on condition that they are contributed solely to this journal. Rules governing publication and method of preparing illustrations furnished on request.

Medical Ethics or the Application of the Golden Rule to Physicians—"Many physicians, it is to be feared, have quite unconsciously tolerated on the part of groups and institutions with which they are connected acts which they would not for a moment have considered if they had felt that they individually were responsible for them.. It has always been recognized, for instance, that "solicitation of patients" is unprofessional, and that a physician cannot ethically engage in such solicitation. Justice and fairness demand that the practice be not indulged in by physicians through groups or institutions with which they may be connected, any more than it would be indulged in by such physicians acting in their individuaul capacities. These considerations led the House of Delegates at the last annual session in St. Louis to incorporate in the 'Principles of Ethics' the following, so that there might be no douubt as to the duty of groups and institutions or of the physicians connected with them:

> Sec. 4. Solicitation of patients by physicians as individuals, or collectively in groups by whatsoever name these be called, or by institutions or organizations, whether by circulars or advertisements, or by personal communications, is unprofessional. This does not prohibit ethical institutions from a legitimate advertisement of location, physical surroundings and special class—if any—of patients accommodated.

"As may be noted, it is recognized that 'institutions' which provide means for treating the sick and which have certain physical attributes which can properly be announced may call attention to these facilities. But groups of physicians associated for any reason, in group clinics or other institutions, should conform to the restrictions governing the individual physician. For professional and quasi-professional acts committed by such groups or institutions, the physicians connected therewith must hold themselves accountable."—(Journal A. M. A., July 8, 1922.)

Hospitals and Medical Education.—"A glance at the conditions of medical education in America would make it seem clear that, from now on, there will be an ever-increasing demand for medical teaching in the non-university hospitals. For, in the first place, undergraduate students can profit by certain educational opportunities that the extramural (non-university) hospitals can make available to them and which the intra-mural (university) clinics cannot offer. In the second place, graduate clinical education is almost wholly unprovided for by the university hospitals and it seems likely that for a long time ahead it must be chiefly carried on within non-university hospitals. And, in the third place, those who are in charge of non-university hospitals are coming rapidly to a realization of a very important fact, namely, that medical teaching and research are essential concomitants of all higher forms of medical practice, even in institutions whose primary function is not in the ordinary sense 'educational.' * * * *

"It should be clear then that the facilities for graduate medical education must speedily be augmented in this country. The opportunities in our larger cities, especially New York, Philadelphia, Boston, Baltimore, Chicago, St. Louis, New Orleans and San Francisco are already better than they were five years ago, and institutions in some of the smaller places, notably Rochester, Minn., are opening their doors to the graduate student. Still, a more systematic organization of the materials and forces available for graduate instruction is an imperative need. A vast field here lies open for cultivation especially by those that are in control of our non-university hospitals."—Lewellyn F. Barker, The Modern Hospital, June, 1922.

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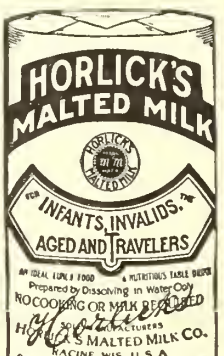

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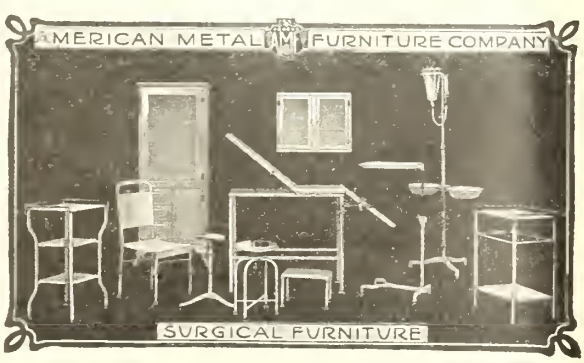

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"Shall this aid be given by the psychologist without medical training or by the medical man possessing knowledge of normal and abnormal psychology? Experience has shown again and again the importance of the medical point of view in connection with these problems, and it is our duty to meet these demands for aid and not pass them by default to the non-medical psychologists. Let me warn you that the medical profession has no time to lose before facing these issues. One has merely to observe the tables of contents of popular magazines and the subjects of lectures before clubs and public and private gatherings of all kinds to appreciate the extent of the invasion of the field of psychopathology by all kinds of lay psychanalysts and psychologists, some of them well trained and well meaning, others dangerously contaminated by occultism, obscurantism, commercialism, or by all of these."—Peter Bassoe, Jour. A. M. A., June 17, 1922.

The Pacific Northwest Medical Assn.—This association held its first meeting in Spokane July 6, 7 and 8, and had an attendance of five hundred from the territory taking in Montana, Idaho, Utah, Washington, Oregon and British Columbia.

The headquarters of the convention were in the lobby of the Davenport Hotel, which was crowded with those in attendance, among whom were notable national medical figures: Frank Billings, Henry Christian, Jos. C. Bloodgood, Walter B. Cannon and E. C. Rosenow of Rochester, Minn.; Arthur D. Dunn of Omaha, Wm. Engelbach of St. Louis, Robt. Milwee of Dallas, Tex.; W. J. Terry of San Francisco, F. M. Pottenger of Monrovia, Cal.; John Butler of Minneapolis, L. J. Hirschman of Detroit, Mich.; A. W. Adson of Rochester, and Frank E. Sampson of Creston, Iowa.

The meeting was a decided success in every way, the attendance large, representative, and included some twenty-five men from California.

A permanent organization was made, J. Earl Else was elected President, Homer D. Dudley of Seattle, President-Elect, A. S. Monroe of Vancouver, B. C., Vice-President, Jos. Tyree of Salt Lake City, Second Vice-President; F. Epplen of Spokane, Secretary-Treasurer.

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The next session will be held in Seattle in 1923.

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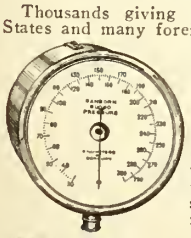

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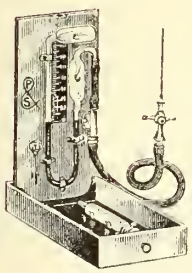

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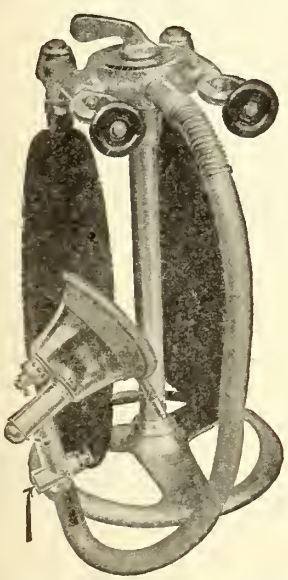

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Shall Politics, Sentiment or Education be the Basis for the Practice of Medicine and Public Health?—"At present there is an army of human parasites who are seeking to get on the payroll of the State or Government and who find the shortest and easiest route to accomplish this end is to inaugurate social welfare movements and propaganda intended to create new positions and that will give them supervision of the health welfare of the people.

Medical men spend years in preparing for the practice of medicine, and it is ridiculous to presume that after a man has spent twenty thousand dollars in money and devoted the time up to twenty-eight years of age to prepare himself for the practice of medicine that the knowledge he would acquire in his studies and clinical training would be inferior to some social uplifter's medical education."—Illinois Medical Journal, June, 1922.

Resolution on Periodic Medical Examinations.—"Whereas, The need and value of periodic medical examination of persons supposedly in health are increasingly appreciated by the public, it is recommended by the Council on Health and Public Instruction that the House of Delegates authorize the Council to prepare suitable forms for such examinations and to publish them in the Journal of the American Medical Association; and that the county medical societies be encouraged to make public declaration that their members are prepared and ready to conduct such examinations, it being understood that the indigent only shall be examined free of charge and that all others are expected to pay for such examinations."—Abstract from Minutes of the Seventy-Third Annual Session of the A. M. A.

Gland Transplantations—Transplantations of glands appear to be becoming the favorite indoor sport of millionaires as well as of certain physicians, some of whom are deficient in standing among their colleagues. Unfortunately for the success of this scheme, publicity has been breaking a little bit too early, and only the initiated know the end results to some of these patients. In California the usual publicity attendant upon this operation performed by distinguished (?) surgeons brought here from other states has been held in abeyance while some of the patients are trying to get well in hospitals.

Some Features of Medical Education—"In very early times students of medicine learned the art through a period apprenticeship. With the creation of medical schools most of the teaching was for a long period by means of lectures, and later clinical exercises came into general use in supplementing theory by the recital of fact. The accepted methods of today involve a form of hospital apprenticeship supplementary to four years' medicine school work under the title of house officer or interne. This interne service has become an essential feature of medical education and is practically universal with ambitious and well-qualified students. Hospitals have become, in a large sense, teaching institutions, because it has been found that the teaching of doctors and nurses is an essential part of hospital service. Except in the cases of a few hospitals maintained as private enterprises, the public has a right to demand that in addition to giving the best possible service to the patients, physicians and nurses should be trained so that the benefits of such institutions should be extended beyond their walls and reach all who later come under the care of those educated therein."—(Boston Medical and Surgical Journal, June 22, 1922.)

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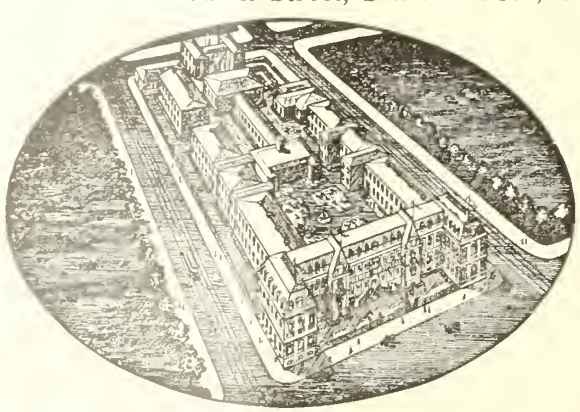

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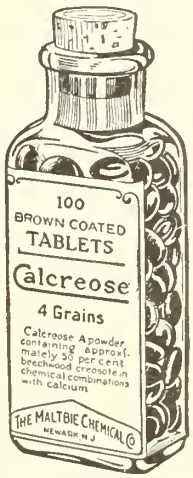

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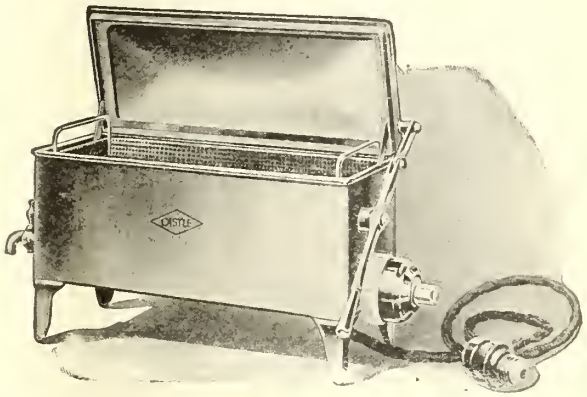

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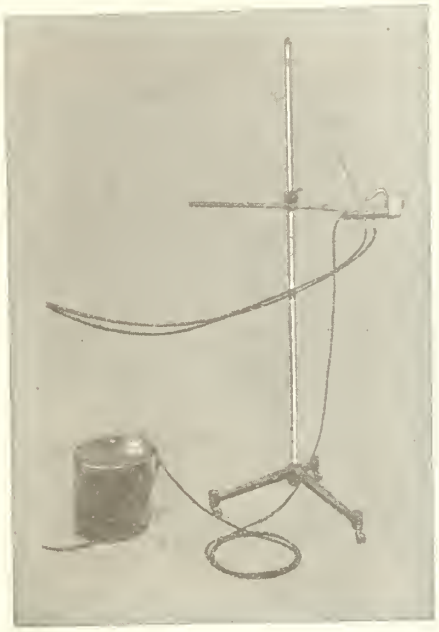

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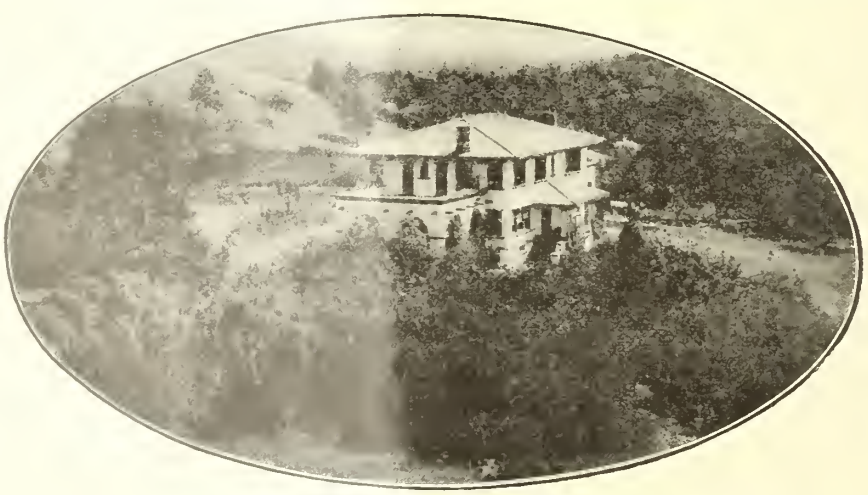

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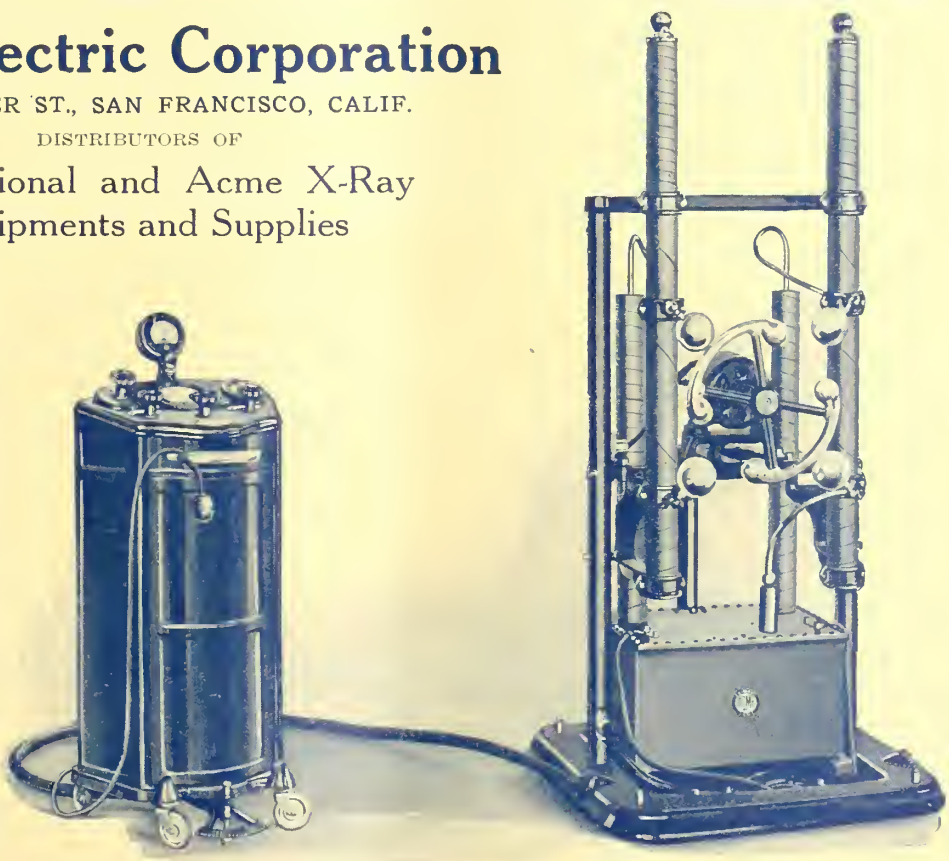

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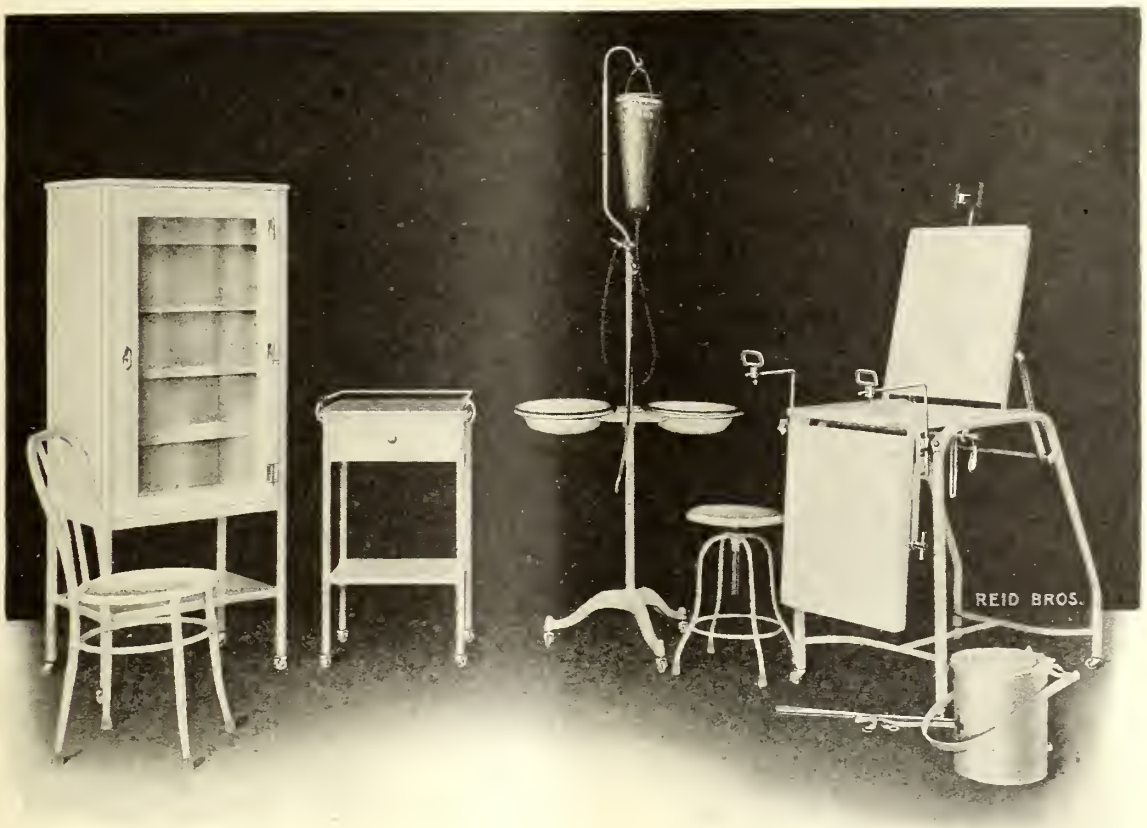

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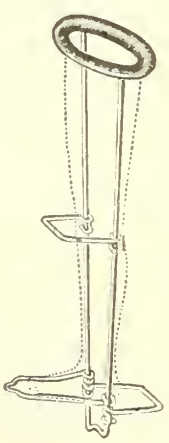

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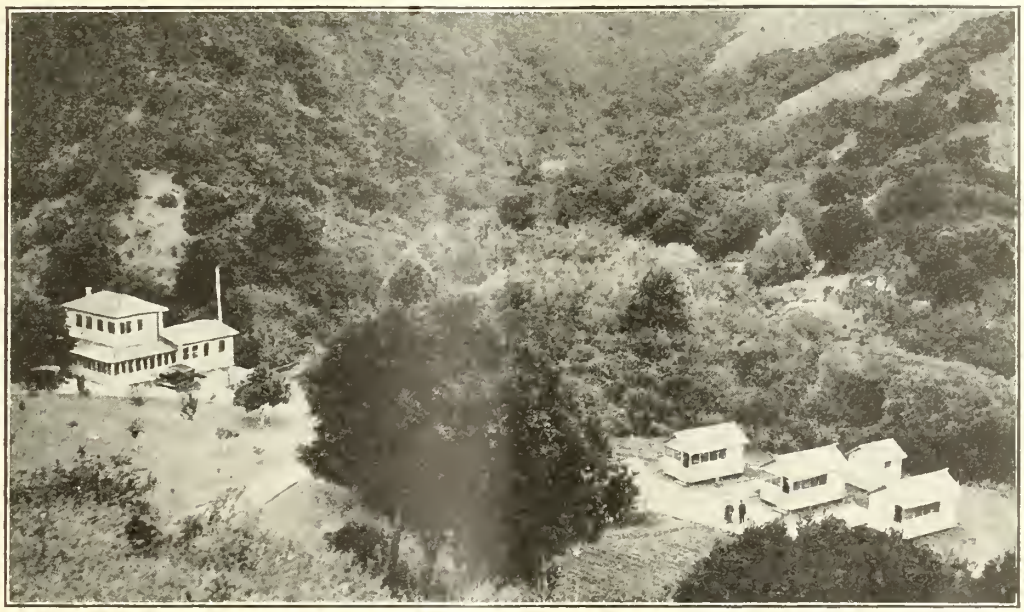

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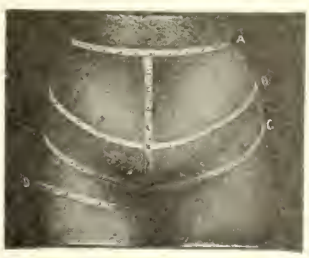

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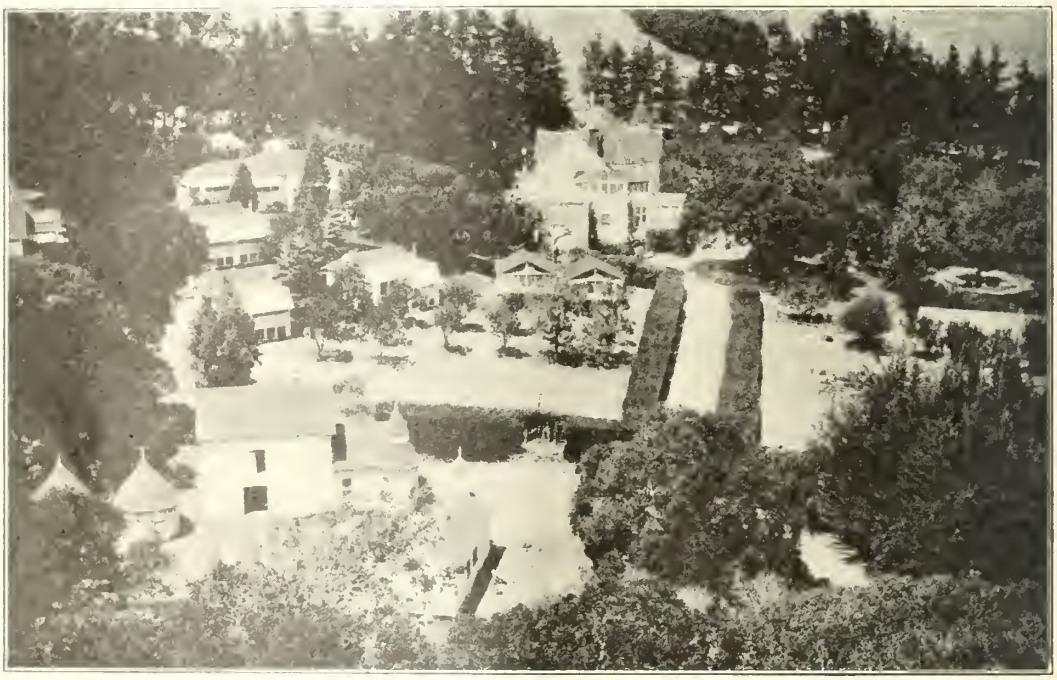

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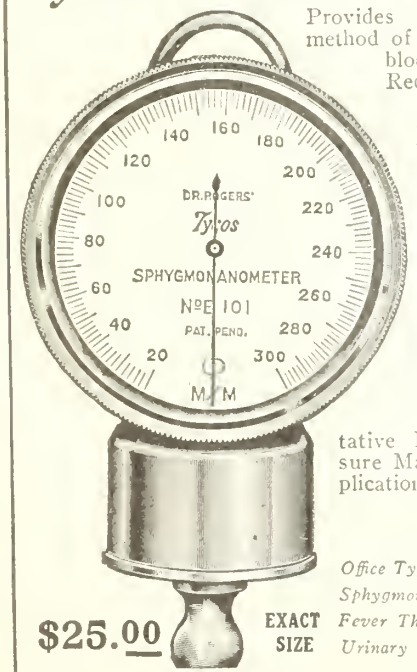

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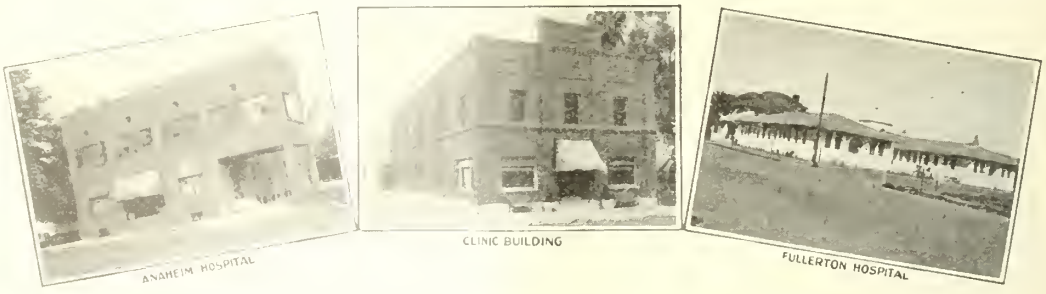

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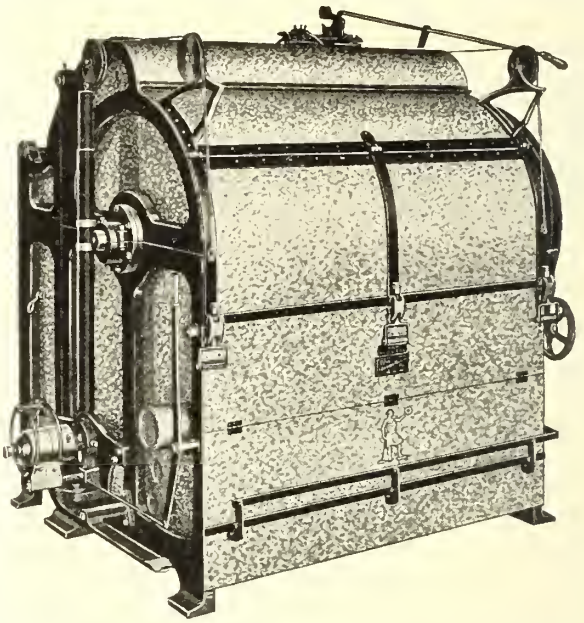

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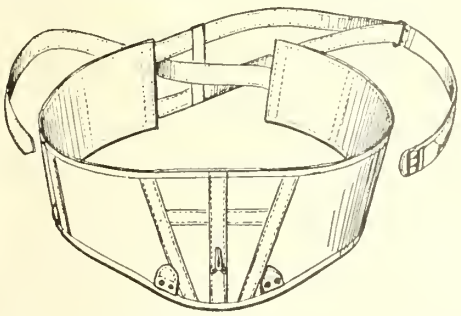

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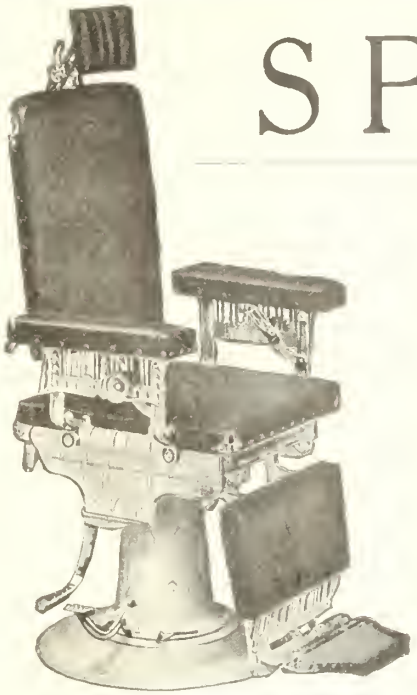

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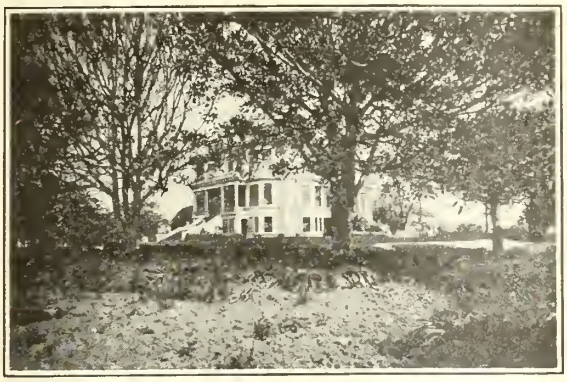

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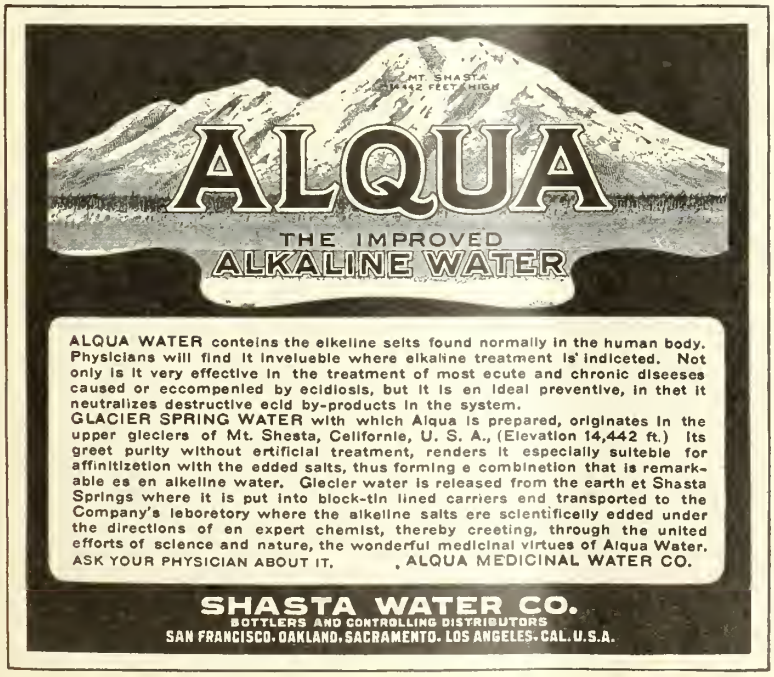

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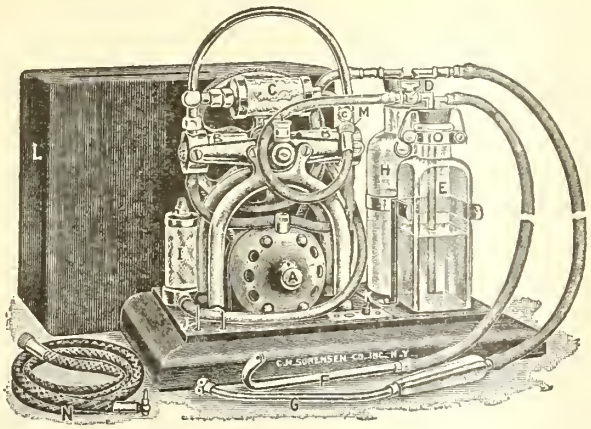

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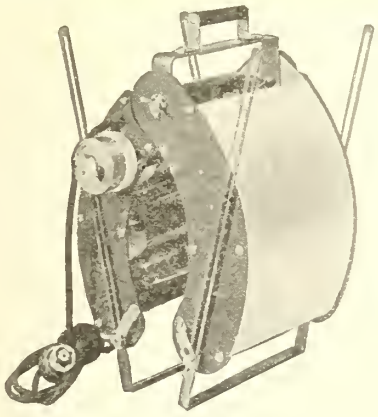

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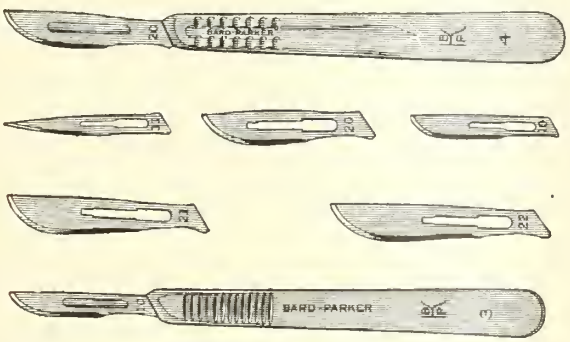

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ASSETS	$76,170,177.18
DEPOSITS	72,470,177.18
CAPITAL ACTUALLY PAID UP	1,000,000.00
RESERVE AND CONTINGENT FUNDS	2,700,000.00
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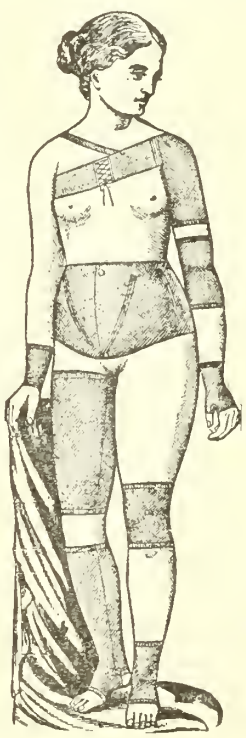

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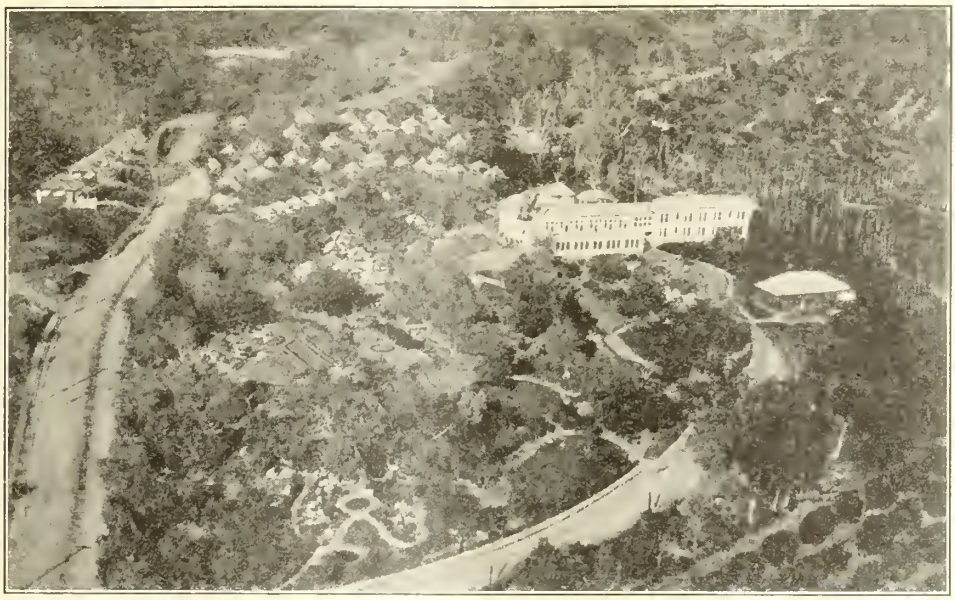

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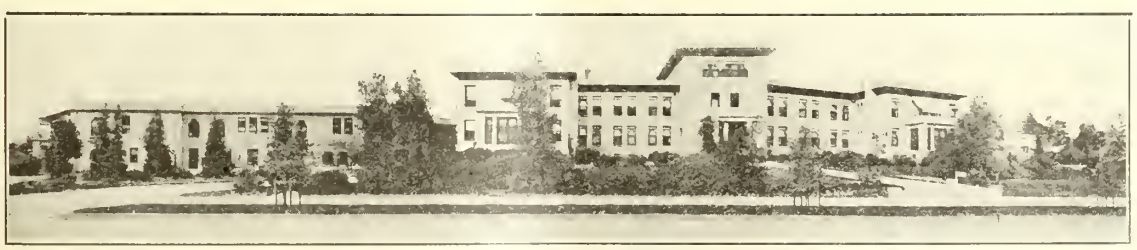

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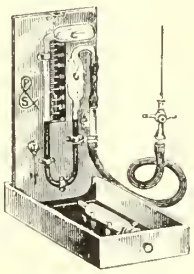

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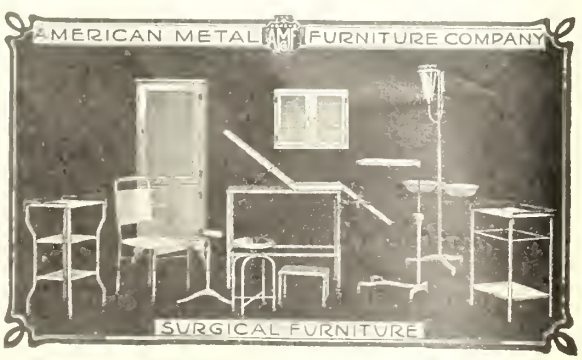

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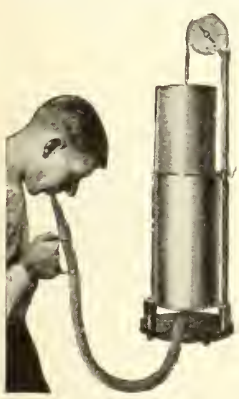

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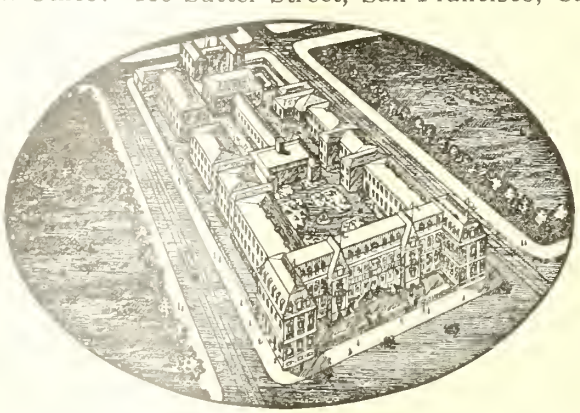

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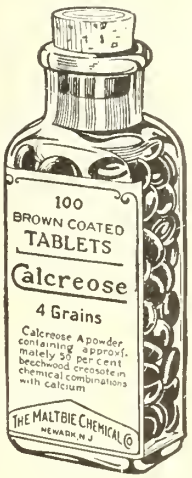

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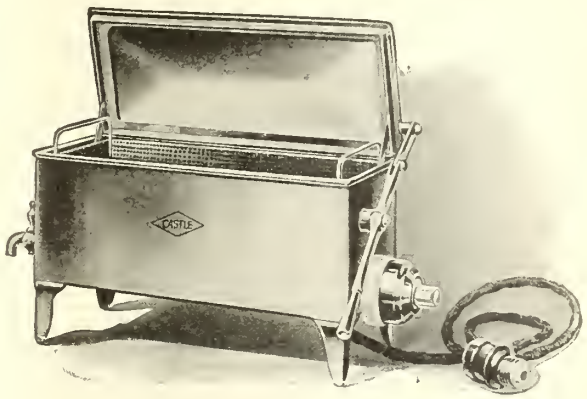

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Medical Women's International Association—The second meeting of the Medical Women's International Association will be held at Geneva, Switzerland, from the fourth to the seventh of September, 1922. Each society of medical women is invited to send one eligible delegate, and an additional delegate for every hundred members. Interesting reports will be read by medical women from different countries, and the constitution of the organization will probably be revised in accordance with the provisions under which it was adopted. Clinics in the different European cities may be visited en route. The attractions of travel in Europe are great this year. Practically all countries are accessible and the Passion Play will be on at Oberammergau during the entire summer.—Martha Welpton, M. D., Corresponding Secretary, First National Bank Bldg., San Diego.

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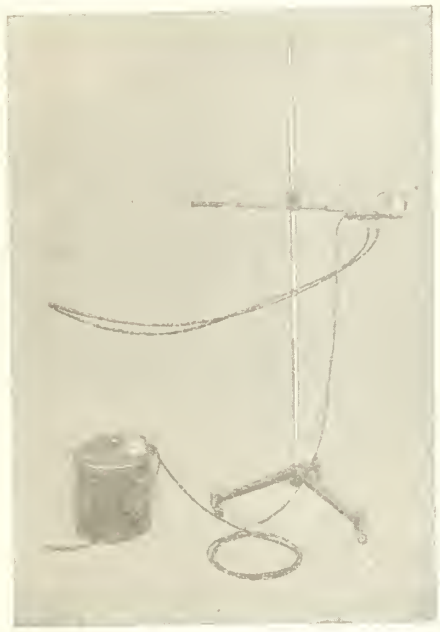

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Yeast Preparations—The Council on Pharmacy and Chemistry of the A. M. A. has published an interesting report upon this subject (Journal A. M. A., July 8, 1922). "The ingestion of yeast in liberal portions is known to produce a laxative effect. In some cases, particularly in young children, such use of yeast has been followed by intestinal distention, doubtless attributed to fermentative gas production by the surviving yeast cells. There is, however, a preponderance of evidence regarding the advantageous use of yeast as a mild laxative. Aside from the objectionable possibility just referred to, there are no serious contraindications. Whether the laxative action of yeast is due to the survival of the living cells or to a chemical component of yeast which may also be present in dead cells is not clear at present. Yeast has often been recommended for internal administration because of its supposed beneficial effects on furuncles, acne, etc. Its adherents assert that it is almost a specific. Many, if not most, clinicians doubt this remarkable effect, which may, after all, be expected from any anticonstipation agent. Whether yeast or its products can provoke a leukocytosis likewise remains undemonstrated. Many of the conditions for which yeast and yeast preparations have been recommended therapeutically are so variable in their clinical course and so likely to show improvement without special treatment that the elaborate claims made in regard to yeast therapy for somewhat indefinite disorders must be largely discounted. It is not clear to what extent, if at all, live cultures of yeast may be used to change the intestinal flora, if, indeed, such a reaction becomes desirable in many of the conditions for which yeast is commonly used.

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For the Treatment of Tuberculosis
Belmont, San Mateo County, Calif.

CANYON SANITARIUM
For the Treatment of Tuberculosis
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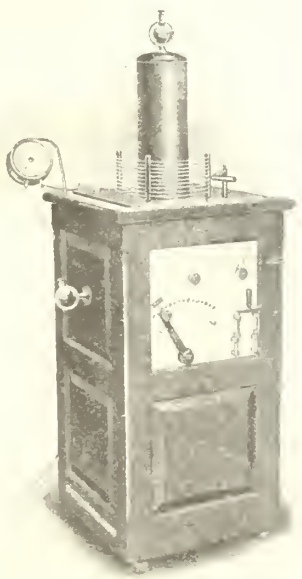

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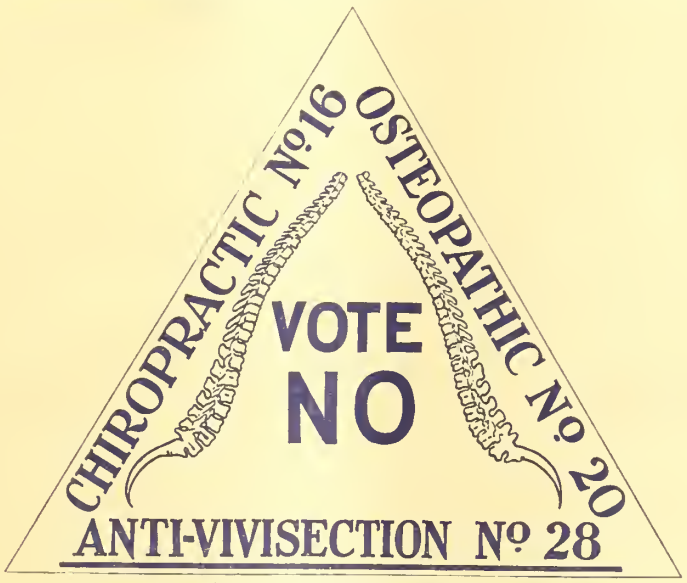

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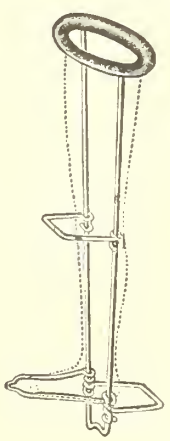

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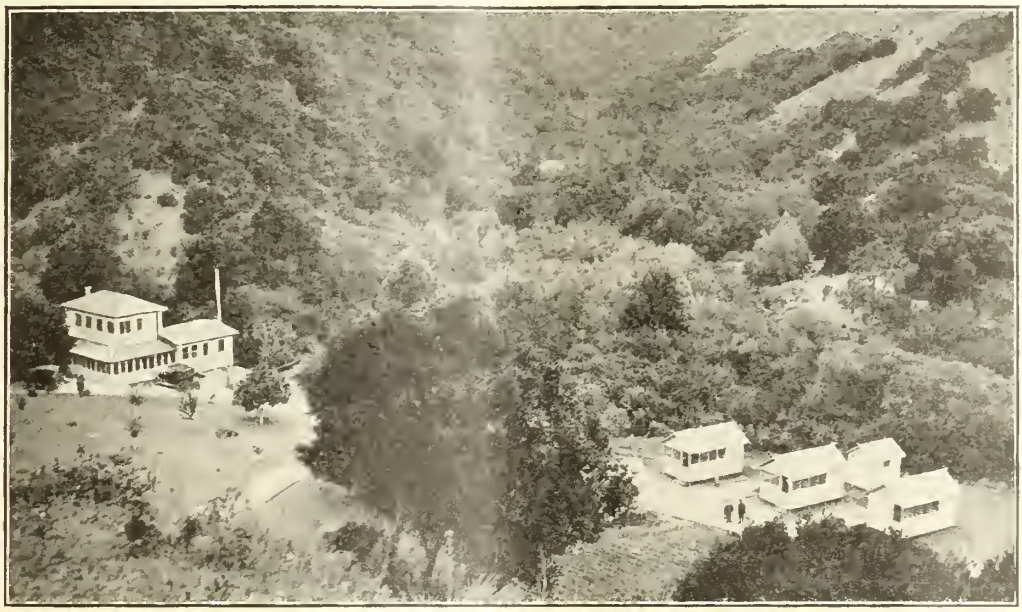

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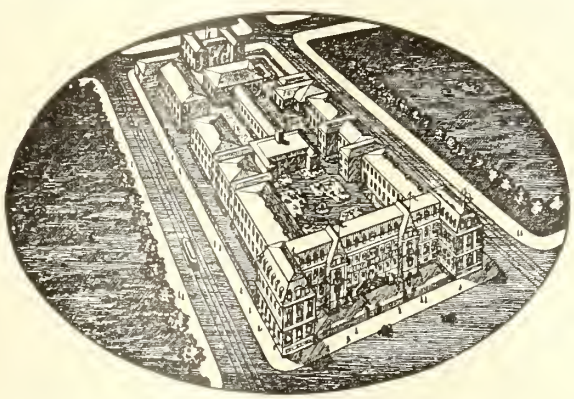

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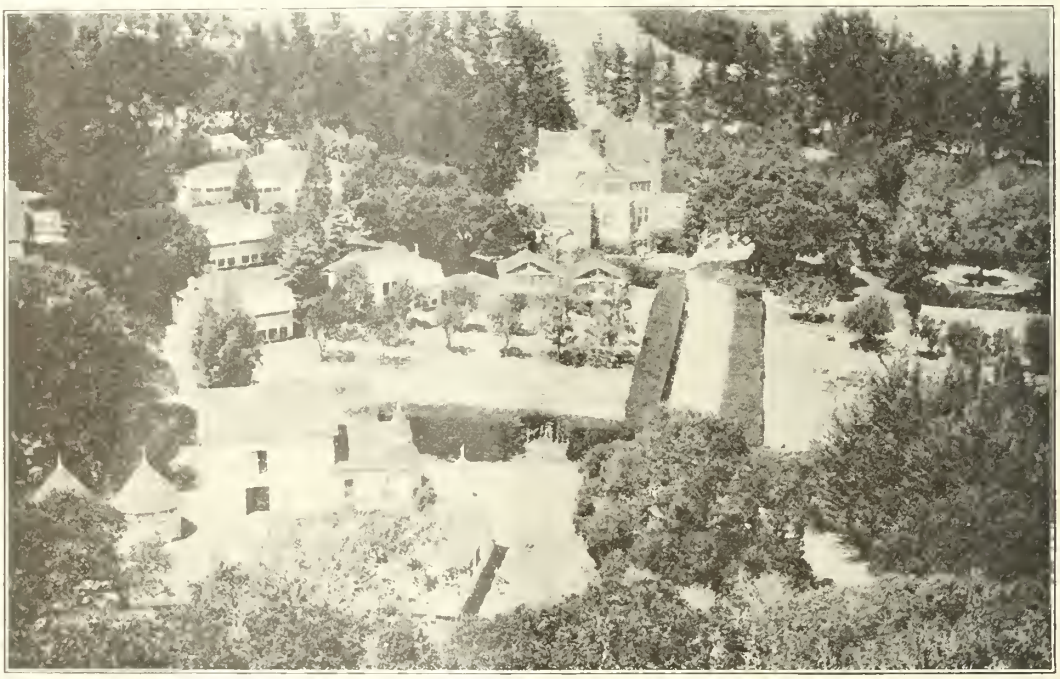

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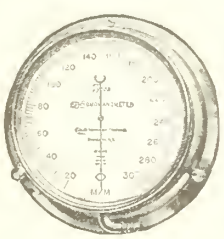

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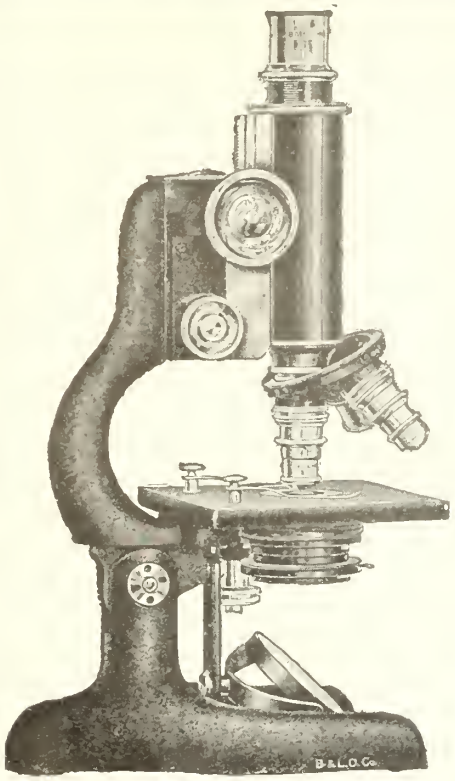

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Radium in Cancer of the Prostate—A Report of 217 Cases. Herman C. Bumpus, Jr., M. D., Mayo Clinic, Rochester, Minn. *J. A. M. A., Vol. 78, p. 1374, May 6, 1922.*

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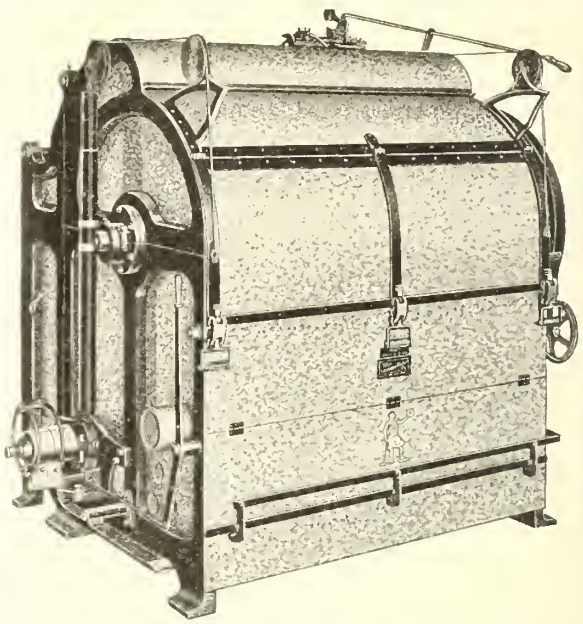

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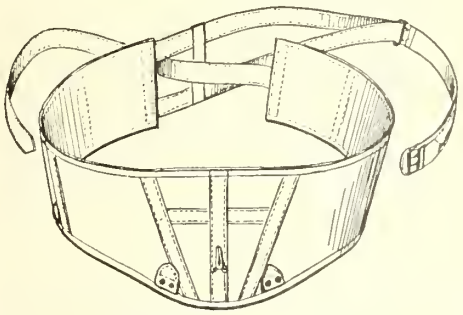

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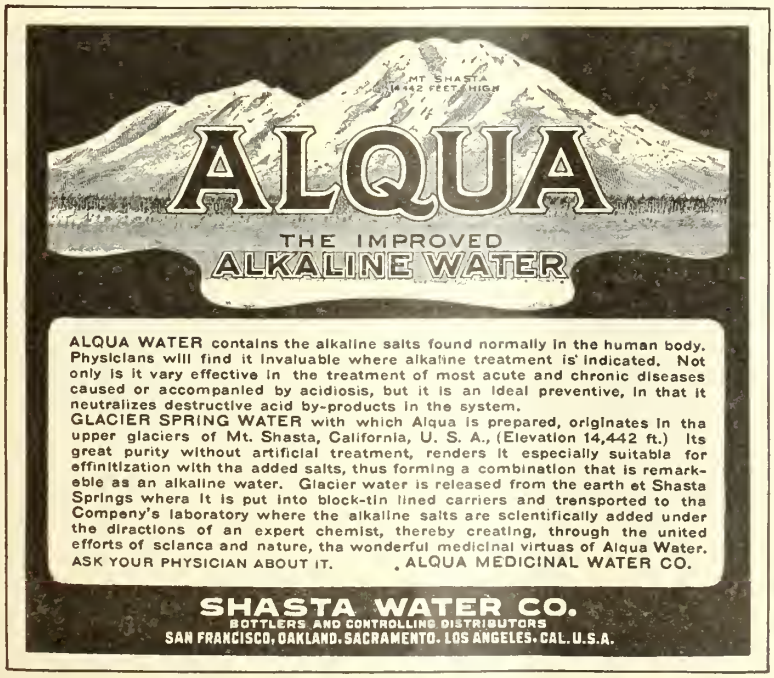

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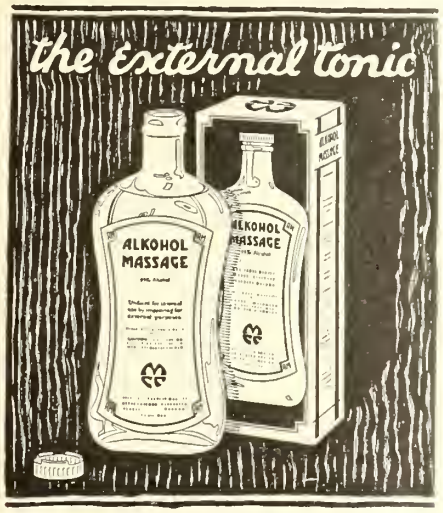

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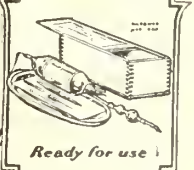

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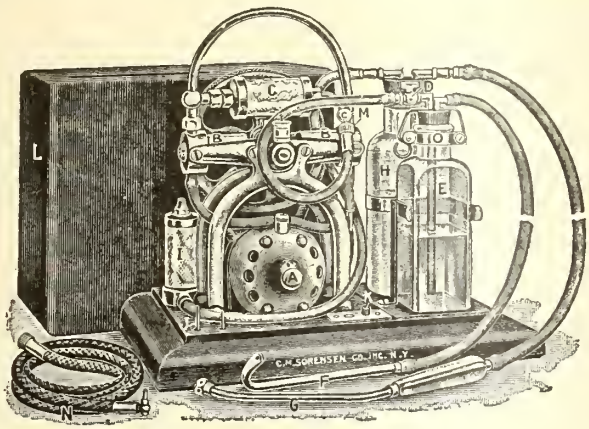

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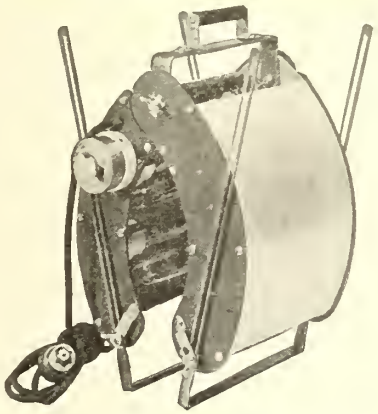

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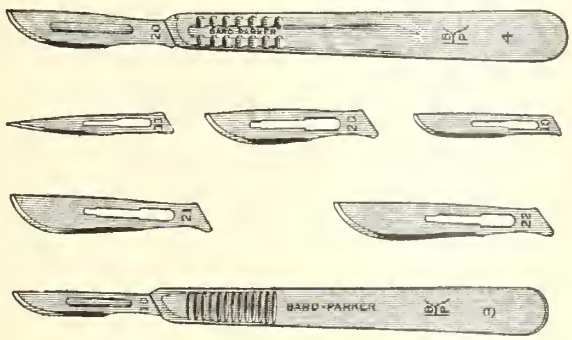

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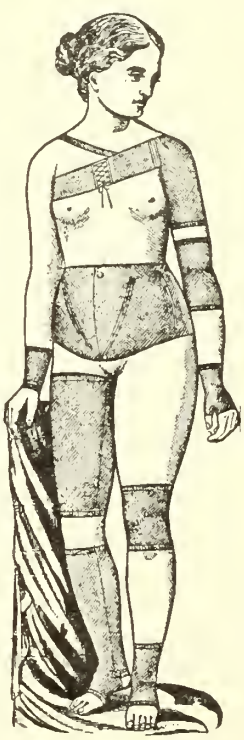

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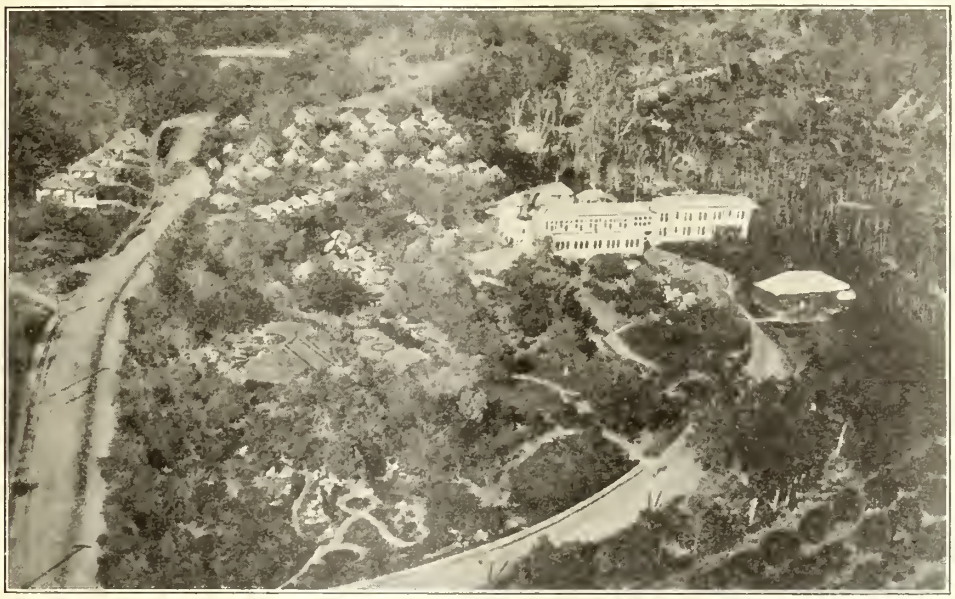

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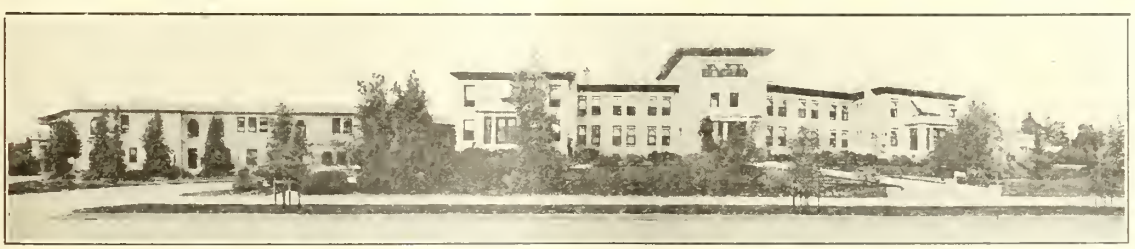

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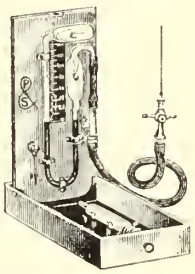

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The Chiropractor and the X-ray—It is interesting to note that the chiropractor has taken advantage of one of the greatest aids to medical practice, the X-ray, only to use it in a pseudo-scientific manner which does impress certain patients, but must react in the end to his own disadvantage. Chiropractors are now in the habit of sending their patients for X-ray examinations of the spine, but they will permit no interpretation of these plates except by themselves. Any little irregularity in alignment due to the position in which the patient is lying when the picture is made or due to a tilt in the tube, is pounced upon as an indication that the spine is out of plumb. This method of examination impresses the average intelligent person as being scientific, unless he thinks deeply in the matter or has his attention called to it by some physician familiar with the physics of the X-ray. This means that considerable harm is being done, and considerable money is necessarily taken from patients, many of whom can ill afford it.—Editorial, Rhode Island Medical Journal.

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EXCLUSIVE PUBLICATION—Articles are accepted for publication on condition that they are contributed solely to this journal. Rules governing publication and method of preparing illustrations furnished on request.

Advertising: Ethical and Otherwise—Under this title the Journal of the Oklahoma State Medical Association says in part:

"Another vexatious phase, one sure to cause trouble in the future, is the unwarranted and inexcusable custom lately adopted by certain 'small-town' hospital organizations by which they publish or influence publication of lists of patients recently 'operated upon at So and So Hospital.' In the first place, the practice borders on mountebank tactics; it appears instantly to the refined as impossible practice, it brands the perpetrator as of unenviable grade in the scale of professional attainment, and in certain cases it is nothing more or less than dishonest practice. The plea that it is not the individual physician connected with the hospital, but the hospital itself doing the advertising is unacceptable as explaining and condoning the practice from any viewpoint. The injustice of this class of impropriety lies in the fact that it advertises and gives supposed preferment to a few individuals only. By no means may other physicians, equally or better qualified professionally, participate in such advantage, if, indeed, it is an advantage. The practice at once places the beneficiaries in a position of advantage which cannot be acquired by others in the same vicinity. Any maneuver or activity giving preferment or monopolistic position to the few, and which cannot be enjoyed by all, is an impropriety to say the least. That it is rapidly coming to the time where a reckoning must be had goes without saying. It seems to be the safest plan or rule that any action or practice of the individual not generally practiced by his colleagues in that vicinity should be avoided and condemned."

Nevada State Medical Association—The nineteenth annual session of the Nevada State Medical Association will be held at Bower's Mansion, Nevada, on Friday, October 6, and Saturday, October 7, 1922. Ralph Alvin Bowdle, president; Horace J. Brown, secretary-treasurer.

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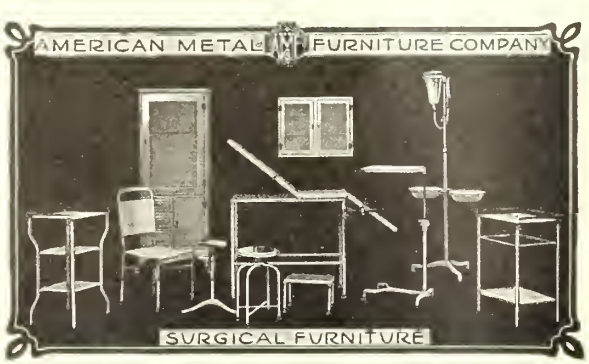

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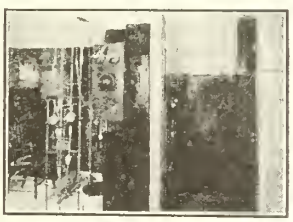

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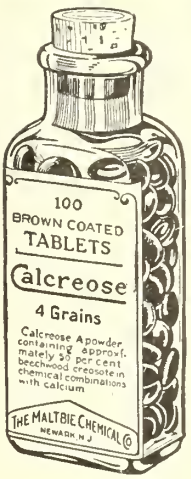

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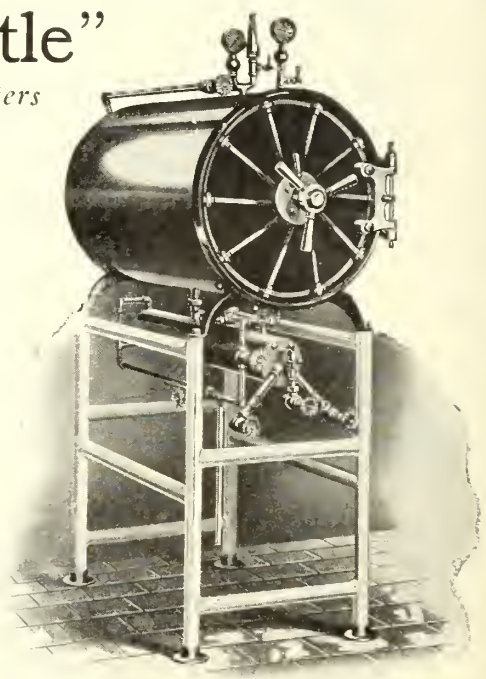

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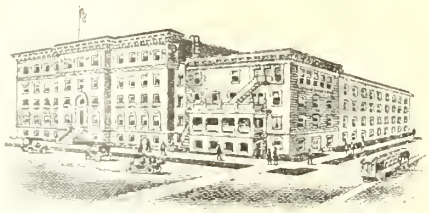
No encouragement should be extended to those about to enter the profession of medicine or to those already in to continue, unless they are supplied abundantly with gray matter. The misfits in medicine, as well as in other occupations, are due largely to a lack of understanding. There are some in the corn-field who ought to be in medicine; there are some in medicine who ought to be in the corn-field. . . .

A finely endowed intellect is needed to carry on in the realm of science, to withstand its temptations toward the illogical, to keep clear-headed in the midst of fact and fancy. Such endowment comes not from science itself; it issues permanently from a mind nurtured in the ways of thinking. The handmaiden of brains, essential for the physician, is common sense, which is simply the ability to put brains to good account. In the words of Holmes, "Science is a first-rate piece of furniture for a man's upper chamber if he has common sense on the ground floor. But if a man hasn't got plenty of good common sense, the more science he has the worse for his patient."

Make no mistake about culture. Culture is refinement, accuracy, poise, resourcefulness; it is not effeminacy, weakness, conventionalism, impracticability.

Detracting not one whit from the appeal for better mental equipment, it appears even more timely to emphasize the greater need for moral qualification in the physician. By this no reference is meant to righteousness or to worlds to come, to religion or to denominationalism, but only to the possession of a sound moral sense. The character of a physician is his most priceless property. It is what he stands for and whom he stands for; it is his attitude toward life; it is "what God sees him do in the dark." Truth is the goal; it develops character, and character tells in one's work. Too many are entering the medical profession without good working consciences, without a keen appreciation of the difference between right and wrong; too many are coming into an honored and honorable calling with low standards of trade and traffic in their souls; too many get in who are not gentlemen to begin with, and cannot be made gentlemen to end with. Today the young physician too frequently feels compelled to ask his associates, "What do I get out of it?" when he might better ask himself, "What am I putting into it?"

Medicine is both a science and an art; it has to do both with knowing and with doing. It is not an exact science—more's the credit, for exact sciences are inert and uninteresting. But the one big asset for the medical man is the acquisition of the scientific attitude in his student days. Every physician should remain a student the whole of his natural life. A pitiable sight is the practitioner who was known as a "good student," but who, after five years more or less, has degenerated into a routinist, never reviewing his former knowledge or adding to his original store. Such a man, though perhaps skilled in so-called practical affairs, forgets more and more medicine each year, until finally it is difficult for him to keep up. He begins to decry theory and to extol practice; he thinks only of results and never of causes; he speaks magnificently of "common sense" and "letting Nature take its course," but rarely uses the one or permits the other.—Hubert A. Royster, M. D., in Jour. A. M. A., August 5, 1922.



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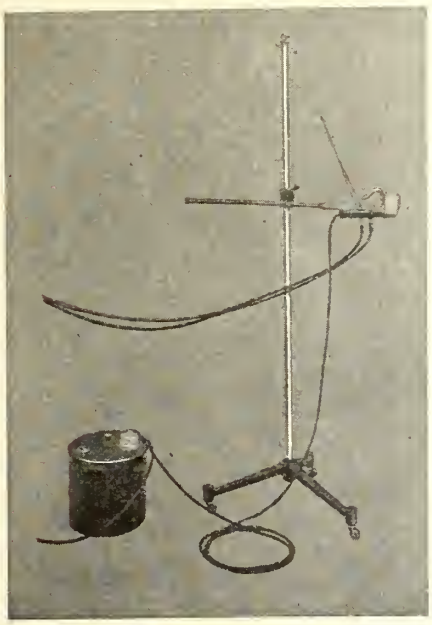

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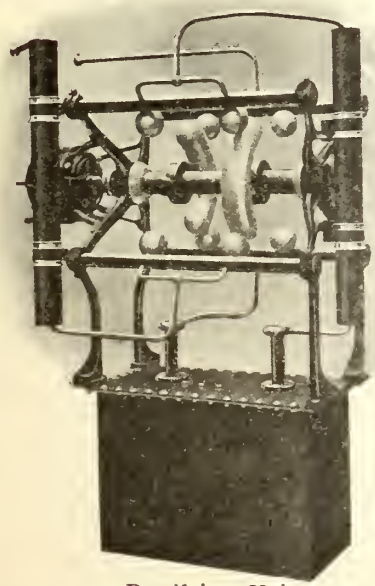

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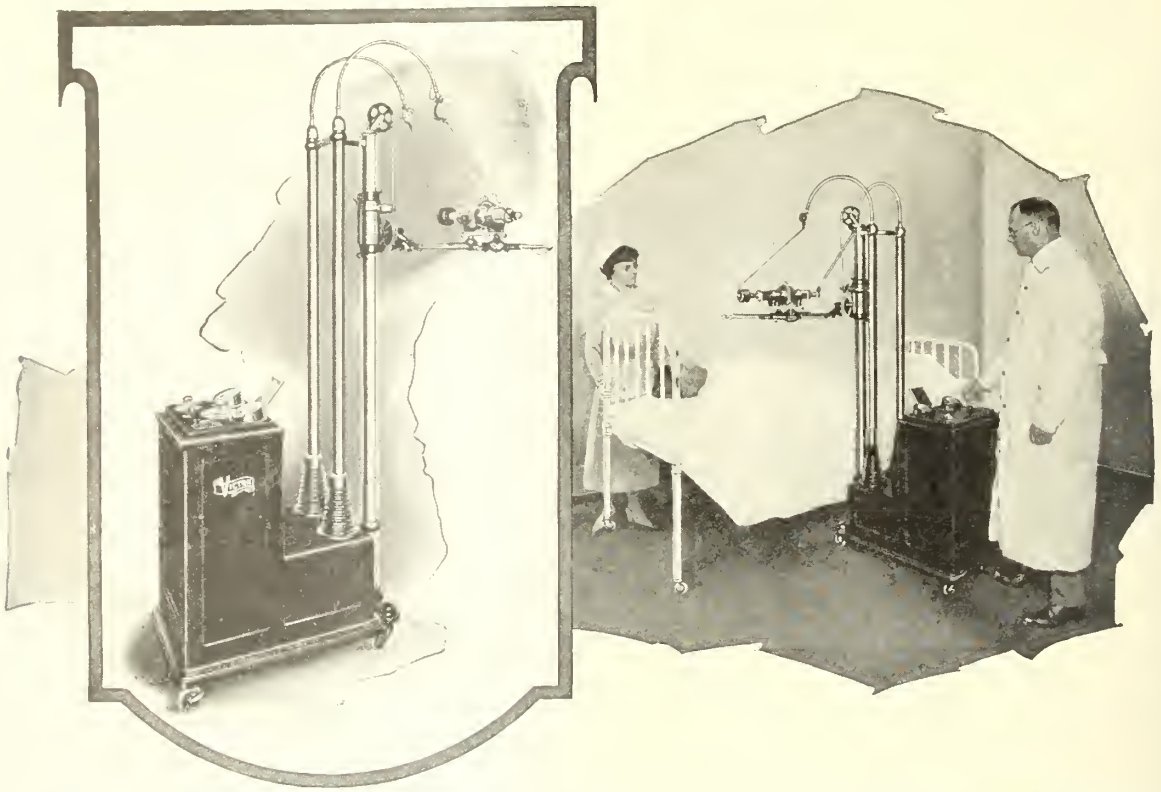

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CALIFORNIA STATE JOURNAL OF MEDICINE

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WHEREAS, It always has been and is the primary purpose of physicians to give trained, scientific, sympathetic service to all of their fellow citizens who need medical advice and to furnish this service to all alike, regardless of the social or financial standing of the patient, and

Whereas, It never has been and is not now necessary to interpose any agency not under the direct supervision and control of competent members of the medical profession, members are reminded of the dangers of co-operation in agencies where such supervision and control does not exist, and

Whereas, In order to re-emphasize these policies and practices to all citizens of California, and to counteract the influences going about the state to the effect that consideration by physicians for those needing medical advice can be obtained only by applying to some non-medical organization, and in order that the public may be fully informed and free to call directly upon the physician of its choice with the assurance of sympathetic and confidential consideration, therefore, be it

Resolved, By the Medical Society of the State of California and representatives of all county and other constituent organizations, in convention assembled, that the office of each of its 4000 members throughout the state is a "Health Center" of the kind that means the best medicine and public health advice that physicians can give; this upon the basis that those who can pay in full should do so, those who can pay part should do so, and those who are unable to pay should have the service without cost.

Resolved, That in order to secure special financial consideration, the patient is requested to execute and sign a paper showing his socio-financial status and setting forth briefly the reasons why he must ask for special financial consideration, this being the policy now being followed by clinics and welfare organizations of all sorts.—(*Resolution passed by the House of Delegates of the Medical Society of the State of California at the Fifty-First Annual Session, May 17, 1922.*)

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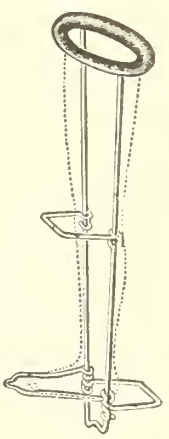

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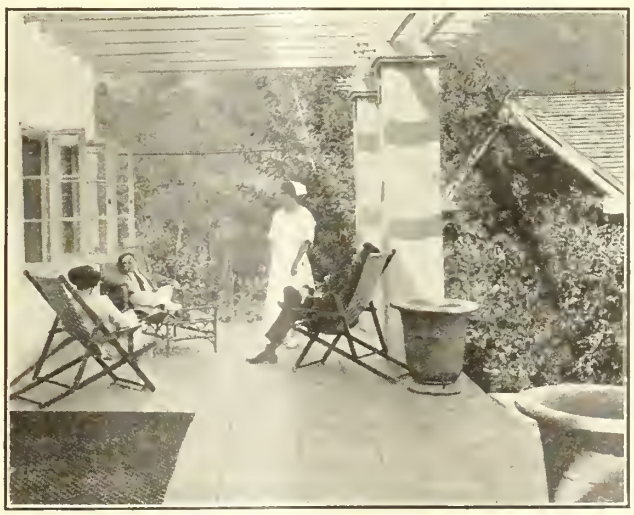

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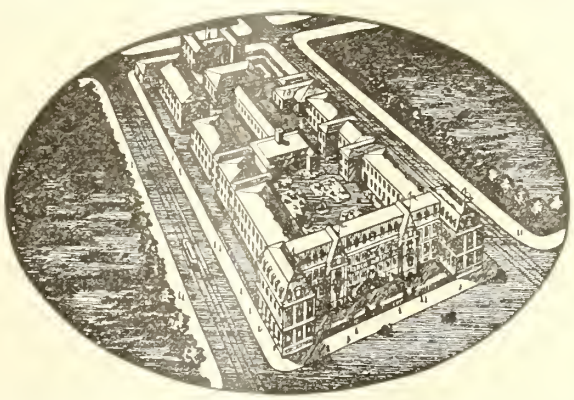

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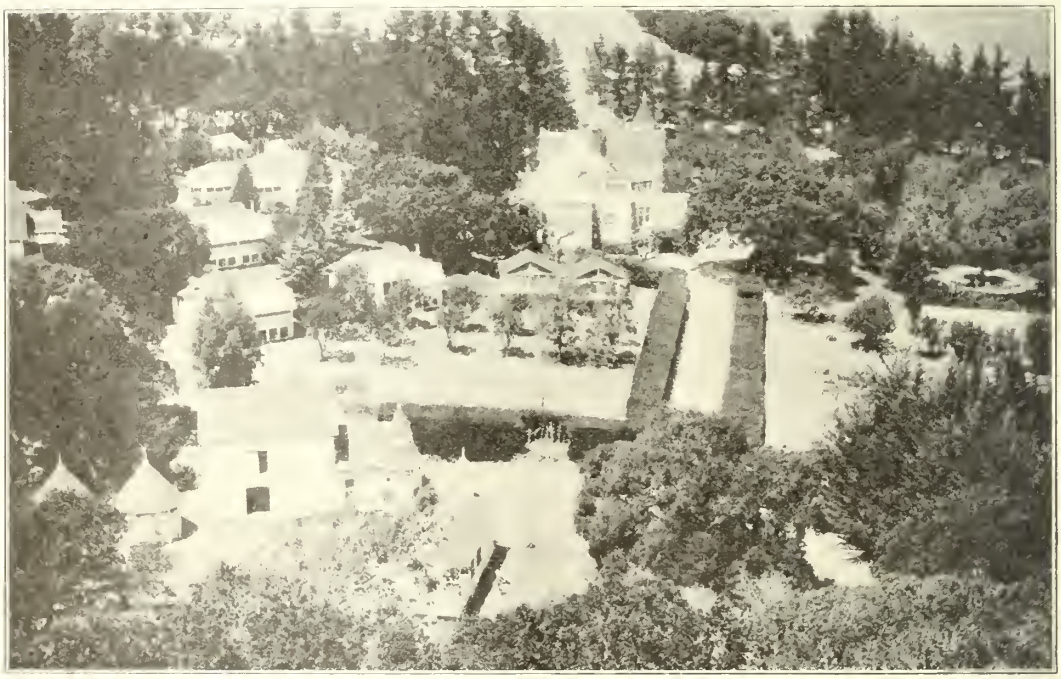

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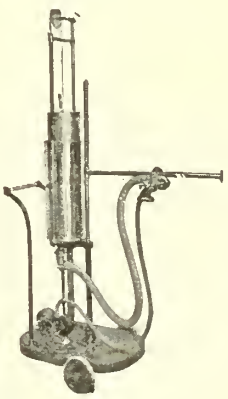

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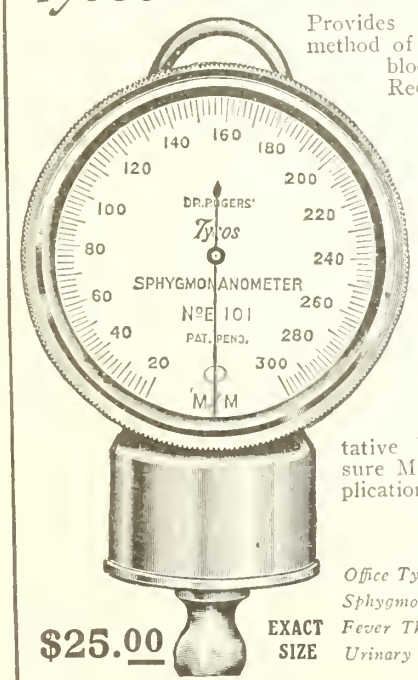

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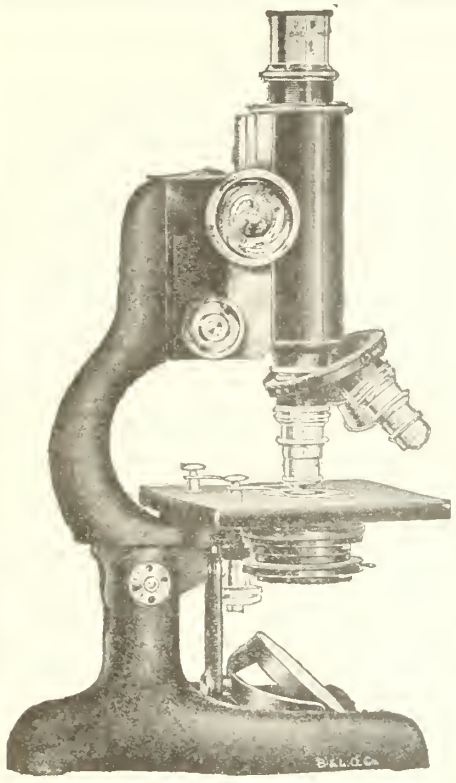

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Radium Emanations in Exophthalmic Goiter. Wallace I. Terry, M. D., San Francisco. *J. A. M. A., Vol. 79, No. 1, July 1, 1922.* Reprinted in THE RADIUM THERAPIST, *Vol. 1, No. 9, Sept., 1922.*

Uterine Hemorrhage of Benign Origin Treated by Irradiation: An Analysis of 527 Cases of Myoma Uteri and Myopathic Lesions. John G. Clark, M. D., and Floyd E. Keene, M. D., Philadelphia. *J. A. M. A., Vol. 79, No. 7, p. 546, Aug. 12, 1922.*

Radium in Cancer of the Prostate—A Report of 217 Cases. Herman C. Bumpus, Jr., M. D., Mayo Clinic, Rochester, Minn. *J. A. M. A., Vol. 78, p. 1374, May 6, 1922.*

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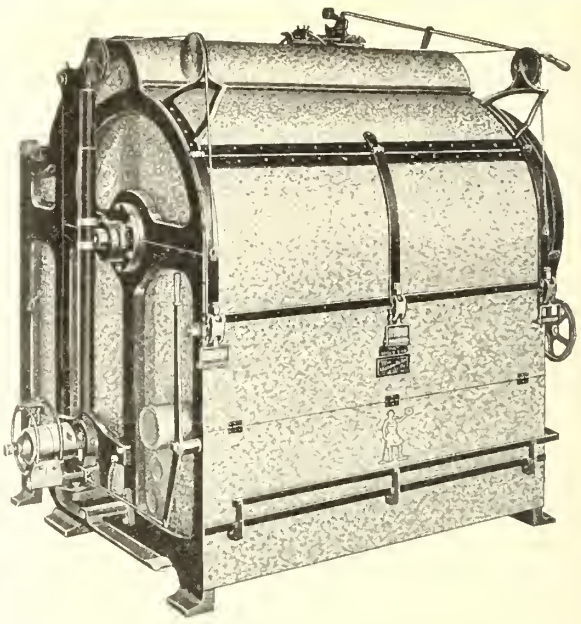

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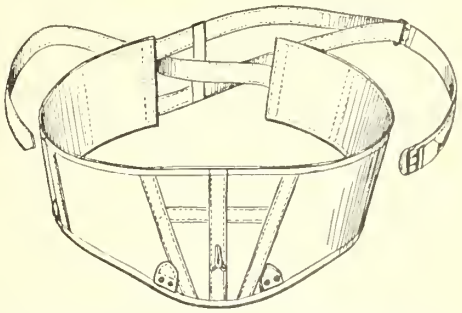

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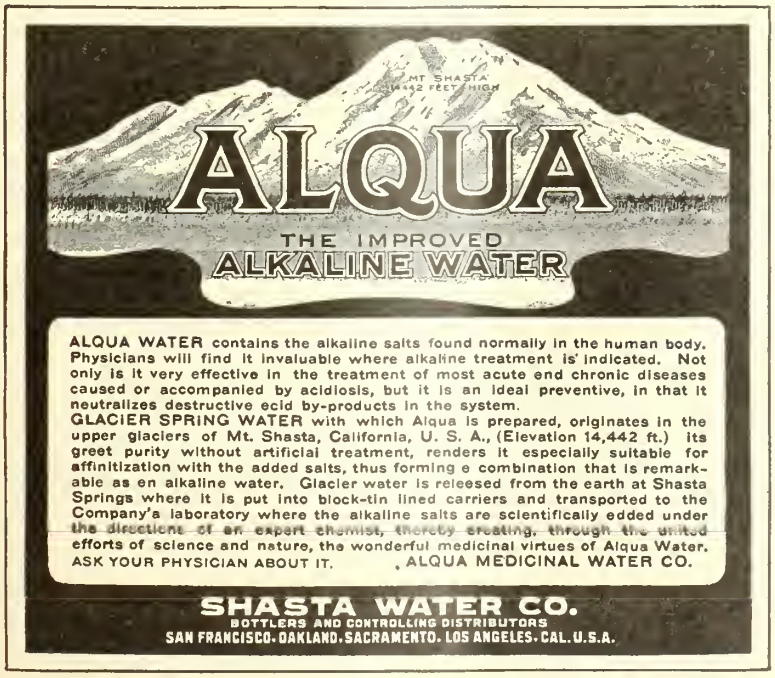

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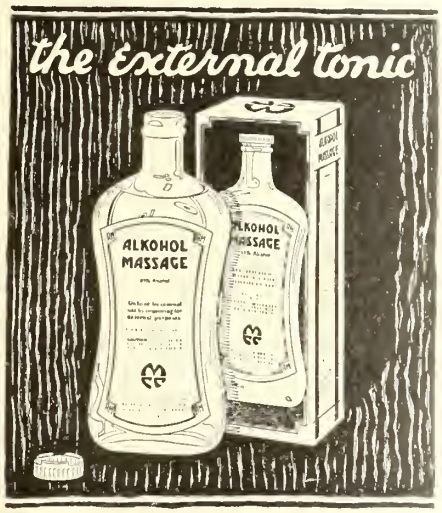

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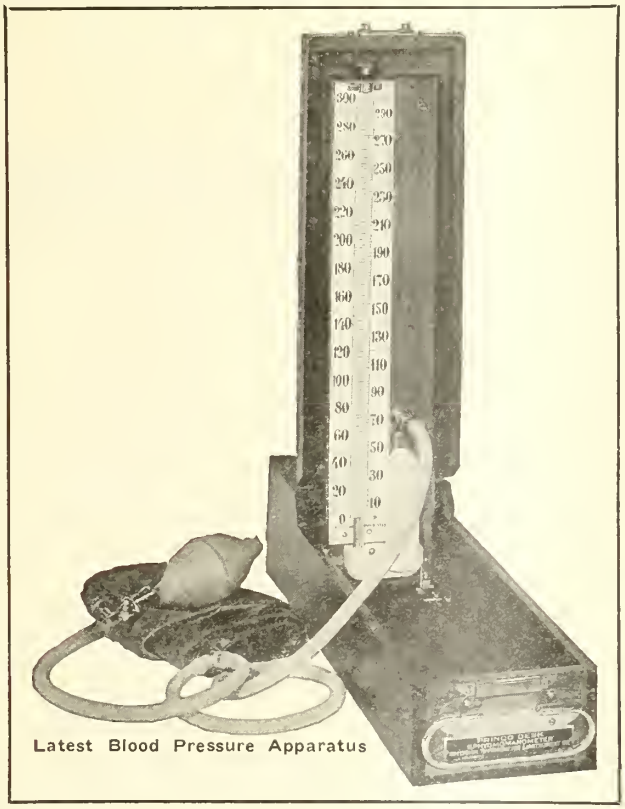

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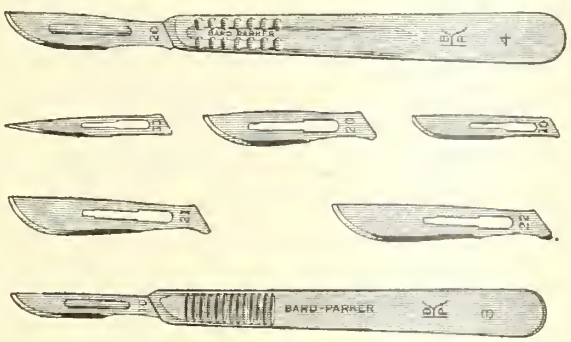

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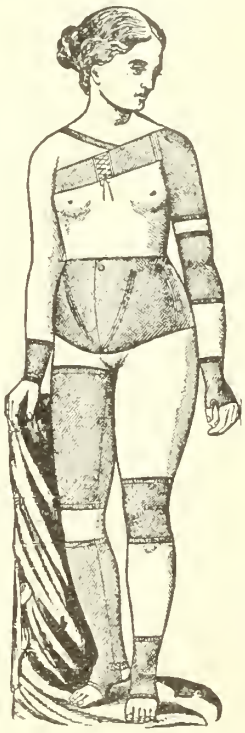

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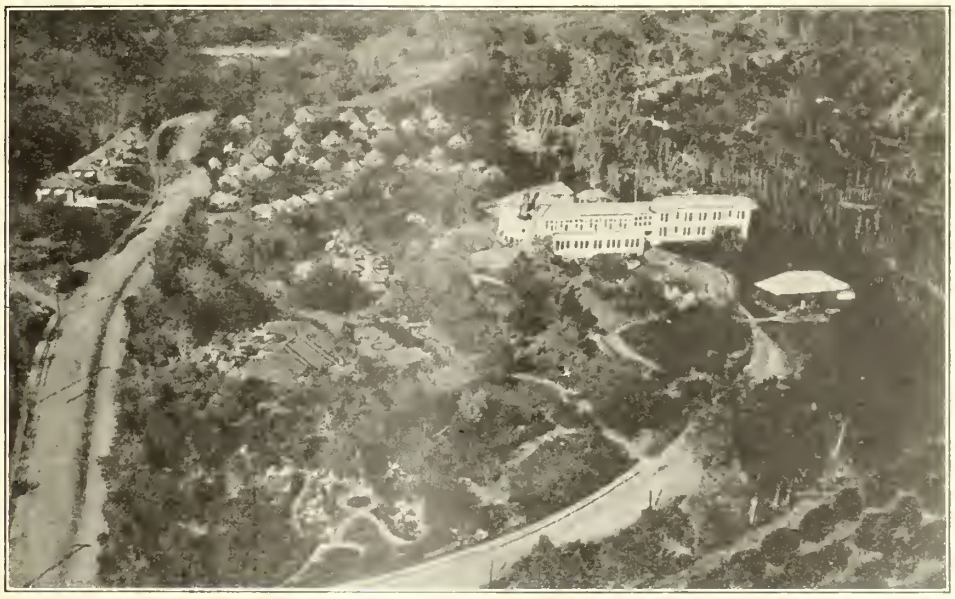

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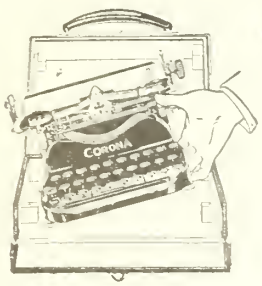

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Contributions to the Pharmacology and Therapeutics of Iodids—The investigations made by Earl D. Osborne, Rochester, Minn. (Journal A. M. A., August 19, 1922), suggest that the iodin given in the form of potassium iodid by mouth forms a sodium protein combination, while in the case of sodium iodid by mouth only traces of iodin enter into combination with the proteins. In a study not yet completed of two patients exhibiting symptoms of iodism following the administration of sodium iodid by mouth, the iodin united with the protein fraction to a greater extent than in normal persons. These observations have a direct bearing on the relative effectiveness of potassium and sodium iodid by mouth and the latter intravenously.

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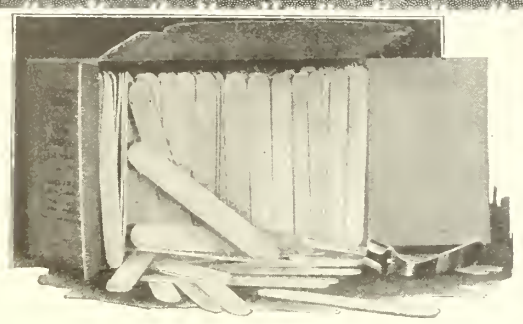

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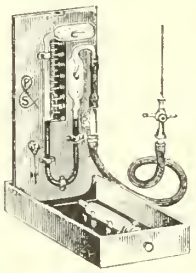

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Vita Zest not Admitted to N. N. R.—The Council on Pharmacy and Chemistry reports that Vita Zest (Vita Zest Co., Inc., New York City) comes in the form of capsules, and is stated to be composed of 83⅓ per cent of "highly concentrated vitamin extracts" (Fat Soluble A, Water Soluble B, and Water Soluble C). The amount of material in each capsule is not declared nor is any information offered to show that the amount (or potency) of the three vitamins said to be contained in the vitamin extract is determined or controlled. Even if it were shown that the product contains appreciable amounts of vitamins, the claims advanced for it are such that most enthusiastic advocates of the administration of vitamin would scoff at them. The Council declared Vita Zest inadmissible to New and Non-official Remedies, because (1) its composition is indefinite; (2) it is exploited under unwarranted therapeutic claims and in a manner which tends to its indiscriminate use, and (3) because the name suggests its haphazard use as a general tonic.—Journal A. M. A., June 17, 1922, p. 1912.

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A Study of Hypotension—A consideration of the blood pressure records in 440 cases of absolute hypotension and in 145 cases of relative hypotension suggests to Stewart R. Roberts, Atlanta, Ga. (Journal A. M. A., July 22, 1922), that hypotension seems to be equally well distributed between the sexes. Hypotension patients have proportionately more normal hearts than have normal persons or hypertension patients. As the pressure rises the heart is more likely to be diseased. The pulse rate is not a determining factor in hypotension. It tends to rise only very slightly with rising pressure. The rate of the pulse is more dependent on the sex than on the blood pressure. Hypotension may accompany different diseases. It is difficult to prove the influence of the disease in the causation of the hypotension because, as a rule, the pressure before disease is unknown. The lowest pressures occur in secondary anemia, pallagra, somasthenia, neuroses, tuberculosis and the acute infections of the respiratory tract. Relative hypotension is a term that should probably be restricted to persons of forty-five years and older whose pressure ranges between 111 and 119, both inclusive. The classification of hypotension is important because it separates hypotension in health from hypotension in disease and makes clearer the intricate problems of low blood pressure. Hypotension is not a bar to insurance in the old line companies, although in one series of 3389 accepted candidates, the death rate was two-thirds greater than the expectancy tables would indicate. Women seem to develop hypotension at an earlier age than men, as indicated by two series of cases. The percentage of the hemoglobin is not a determining factor in hypotension. In disease of the circulation, secondary anemia is the most common accompaniment of hypotension. Arteriosclerosis and myocardial diseases are relatively rare. Focal infections are common accompaniments of hypotension. In sick adult negroes there are more cases of absolute hypotension than of hyptertension. Hypotension seems to tend to accompany acute diseases characterized by fever and chronic diseases characterized by diarrheas, as amebic dysentery, sprue and pellagra.

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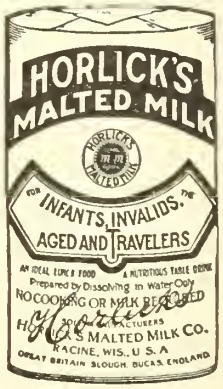

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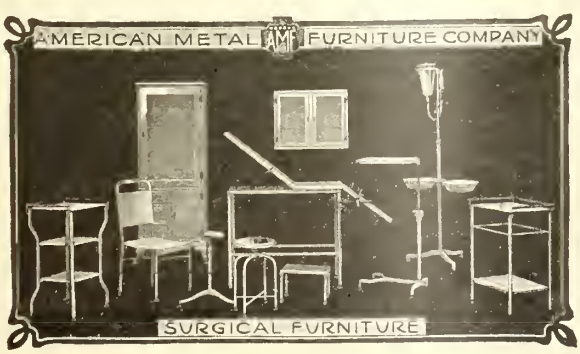

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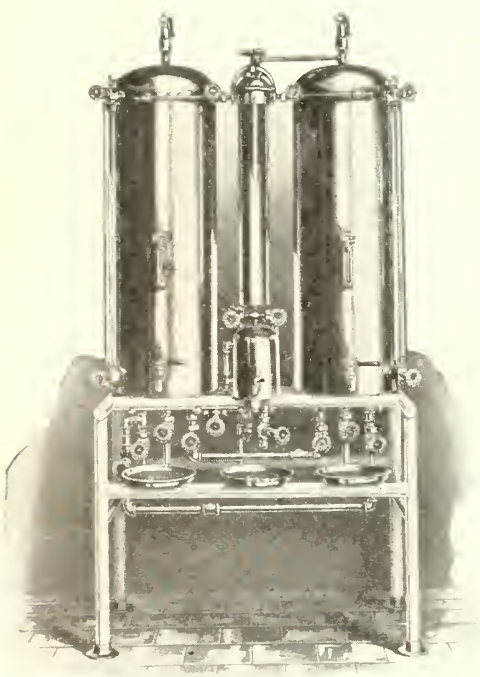

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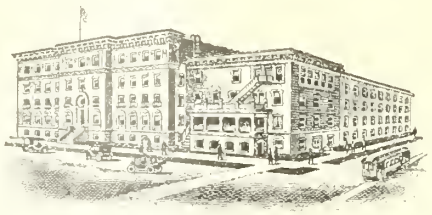

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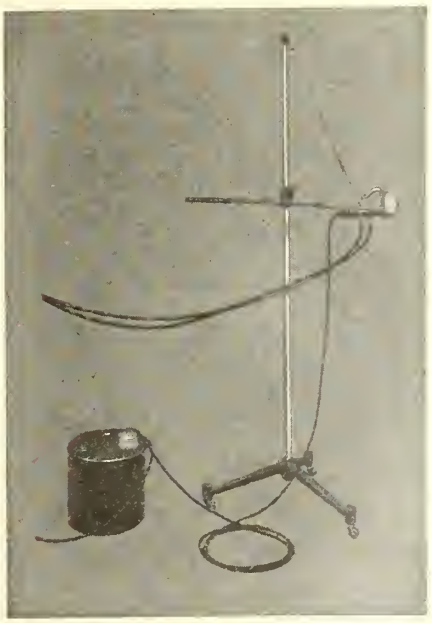

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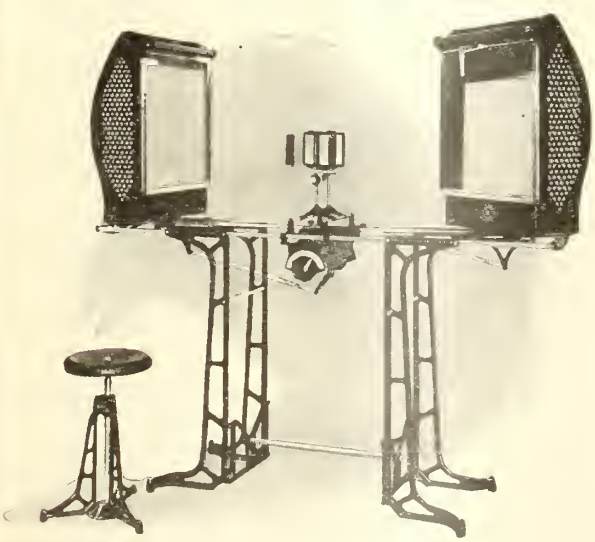

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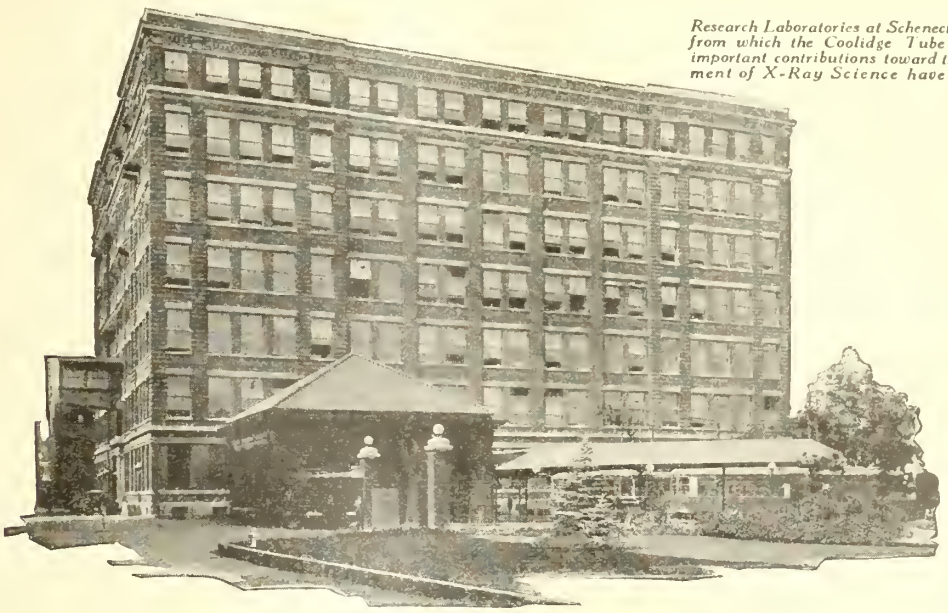

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Oxides on Nitrogen NO and NO_2	Nil

L. H. Miller

L.H.Miller,
Instructor of Chemistry

NOTE—Analysis shows 98.89 per cent pure Nitrous Oxide, diluted 1.11 per cent, consisting of Oxygen, Moisture and Nitrogen, a dilution containing absolutely no harmful ingredient.

This sample was taken from a 420 gallon standard cylinder, which when empty holds at atmospheric pressure 1¼ gallons of atmospheric air, which is .31 per cent of the total 420 gallons in the sample submitted, making the manufacturing purity 99.20 per cent Nitrous Oxide.

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Christmas Greetings

THIS number of the Journal concludes Volume XX of the California State Journal of Medicine and twenty years in the service of medical journalism. The files show a record of continuous improvement in the quality, size and usefulness of the Journal. Its various volumes and numbers indicate the progress in medical education, the practice of medicine, and public health in this state, and they chronicle the growth of membership of the State Medical Society.

The California State Medical Society was organized in 1856 with a few members, and has steadily increased until there are now 3605 members on the first day of December of this year. There are 6650 educated physicians practicing in California, and if the Journal is to meet its future obligations and if the State Society is to discharge its proper function adequately, both the membership of the State Society and the progress of the Journal must be stimulated.

The Journal wishes a **Happy Christmas** and a **Prosperous New Year** to all of its readers.

DECEMBER · 1922

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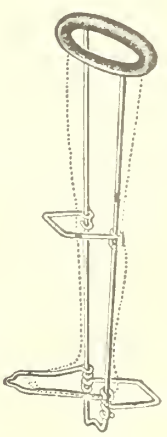

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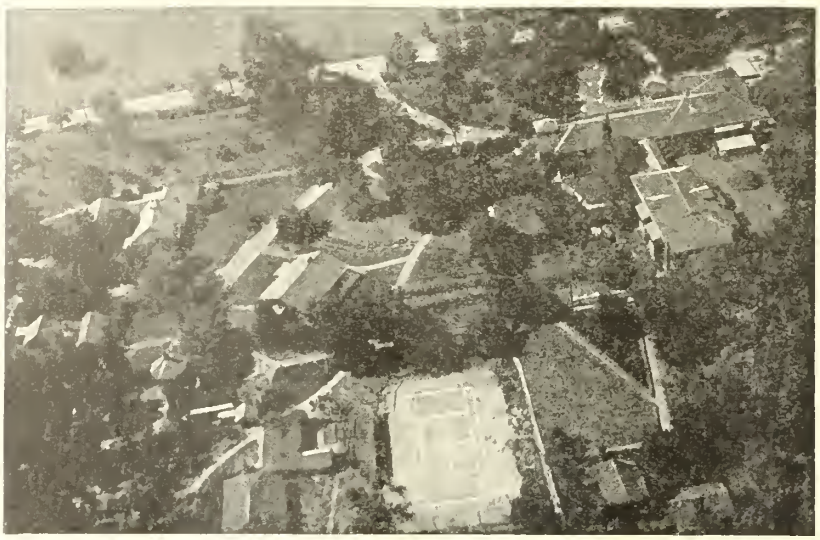

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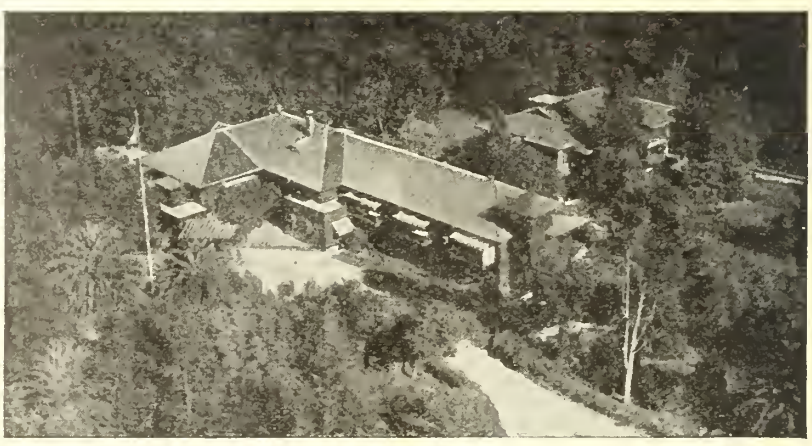

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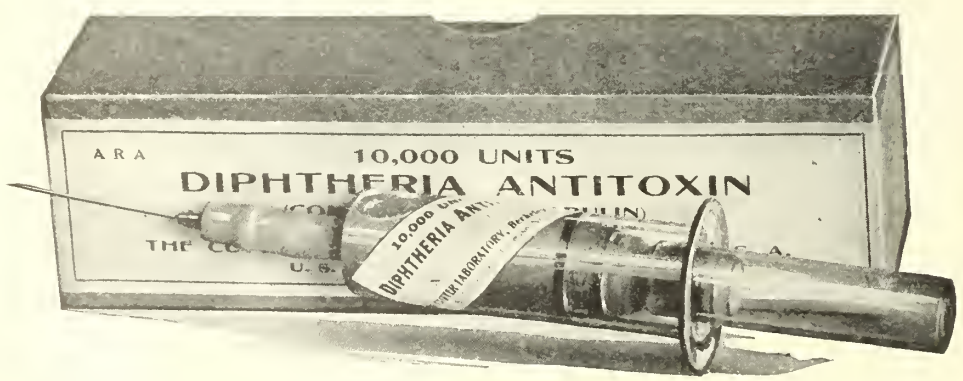

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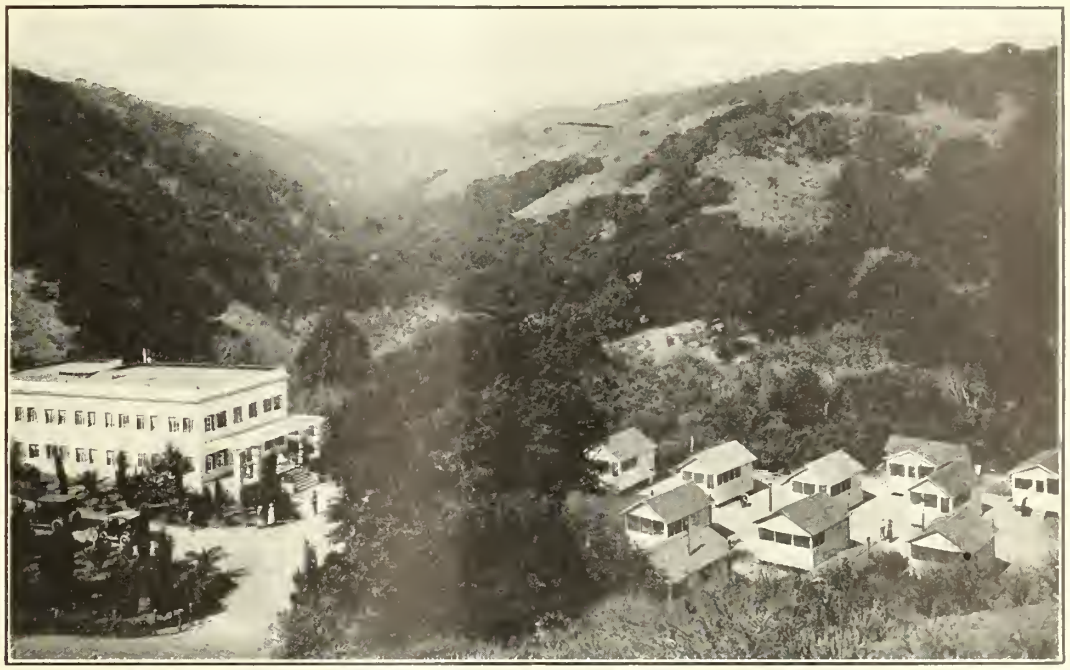

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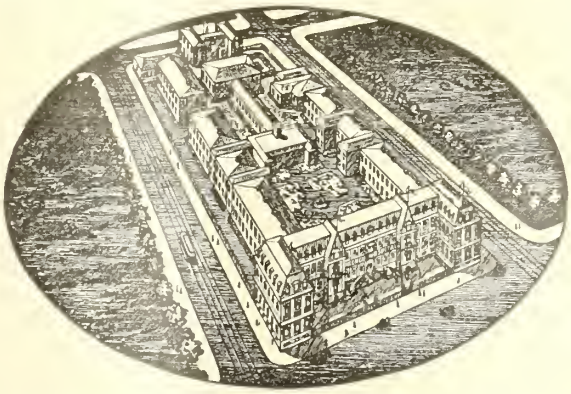

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1. He needs to have a sympathetic understanding of the fundamental human problems in relation to the many complexities of modern life, and must become familiar with the trend of the best thinking along social lines.

2. He needs to know the place and function of sanitation in relation to the public welfare, the how and when and why of environmental influence on health. In other words, he needs to know when and how to make use of the knowledge of sanitary engineering, not necessarily himself to be a sanitary engineer.

3. He needs to be well grounded in the control of the communicable diseases and in bacteriology.

4. It is imperative that he should have a knowledge of hygiene, especially in its relation to the social and medical sciences which attempt to improve the race by approximating a solution of the basic problems of human existence; that is, the problems associated with the necessity for food, shelter, defense and propagation.

5. He needs to have a knowledge of psychology in its relation to conduct, with regard both to individuals and to groups, in order that he may truly educate both individuals and groups in right habits of action, by supplying motives which appeal to them.

The Council on Medical Education and Hospitals is recommending to the American Medical Association at this session that the last two years of undergraduate medical study be devoted to the four majors: practice of medicine, surgery, obstetrics and public health. The college will be asked to pay less attention to courses in special branches during the undergraduate term, and devote more time to the education of medical practitioners.

I believe that more attention to the subject outlined in the foregoing paragraphs will equip men to render a service to the individual and the community which will eventually bring the practice of medicine to a level of achievement undreamt of in the past. I believe that men who have received such preparation will be ready after their graduation to practice medicine in co-operation with the many and varied agencies for social betterment, with a greater degree of mutual understanding.—S. W. Welch, Jour. A. M. A.

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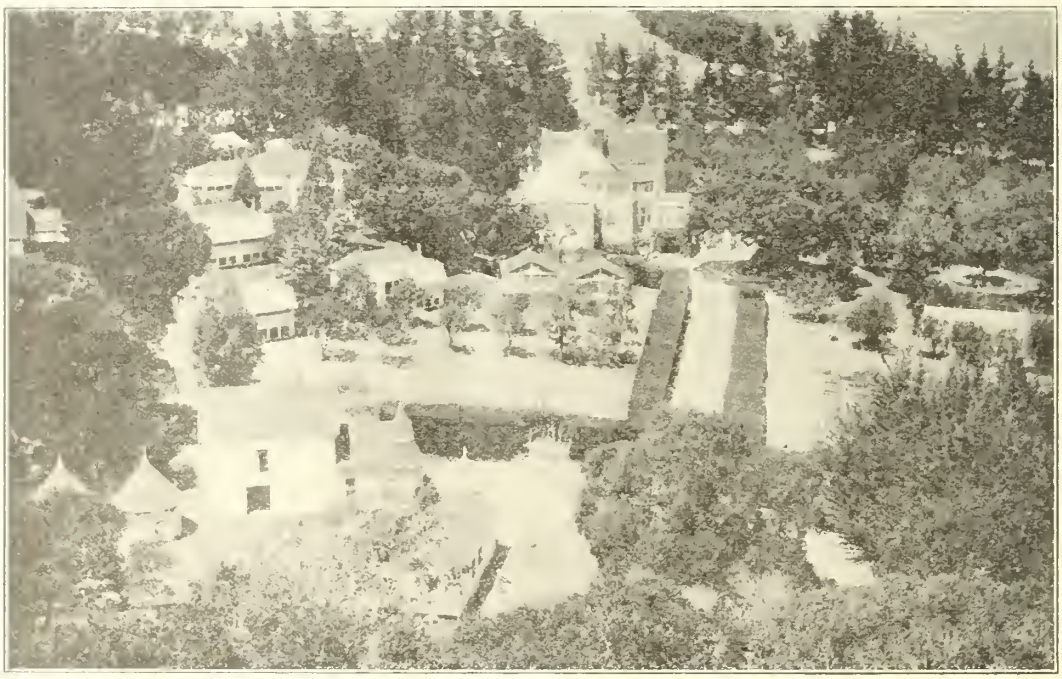

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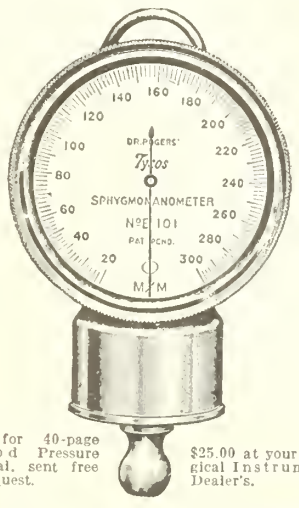

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The list of alleged cures and treatments analyzed and exposed in this bulletin includes many "cures" extensively used in California and extensively advertised in certain quarters of this State. Some of them have headquarters in California. The following are some of the "cures" given in this pamphlet: "Acme Pennyroyal Pills," "Allan's Star Pills," "Alorine Antiseptic Suppository," "Alpen Seal," "Amenoretts," "Andrews' Wine of Life Root," "Annex Powders," "An-ti-seps," "Arthur's Emmenagogue Pills," "Astringent Herb Tablets," "Balm of Figs," "Wine of Cardui," "Cheeseman's Pills," "Chichester's Diamond Brand Pills," "J. Clarke's Female Pills," "Cotton Root Tablets," "Creole Female Tonic," "Dean Vaginal Suppositories," "Dean Female Pills," "Diamond Brand Pills," "J. H. Dye's," "Earl's Kidney and Bladder Pills," "Eastern Drug Co." "N. M. Ellis,' "Ergo-Kolo Female Compound, "G. E. Flood," "For-Me-Ka Oil Vitality," "Gerstle's Female Panacea," "Gold Medal Compound Pills," "Harmless Headache Powder," "Heart, Brain and Nerve Pills," " Hon's Healing Compound, Womb Relief, Womb Suppositories," "Hooper's Female Pills," "Hon's Invigorator Pills," "Moses Job," "King's Star Crown Pills," "Kremoids," "La Franco Combination Treatment and Vitalizer No. 209," "Leslie's Emmenagogue Pills," "Mammary Cell Food," "Martel's Female Pills, Special Female Pills," "Micajah's Wafers," "Mitchella Compound," "Mother's Friend," "Mott's Compound Female Pills," "Opaline Suppositories," "Orange Blossom Suppositories," "Pa-Nol," "Pehn-ix Nerve Vitalizers," "Pierce's Empress Tablets," "Pinkham's Vegetable Comp," "Piso's Tablets," "Porose Pills," "Red Cross Tansy Pills," "Royaline Oil," "Savatan," "Schade's Specific," "Snowdrop Tablets," "Stargrass Compound," "Stella-Vitae," "Strogal," "Thomas Emmenagogue Pills," "Viavi," "Vigor of Life," "Vigoroids," "Vimedia," "Vital Fire Remedy Co.," "Vitopian Home Treatment," "Watkins' Female Remedy," "Womb Tonic and Vitalizer Tablets," "Wrightsman's Sovereign Balm of Life," "Yale's Excelsior Fruiticura."

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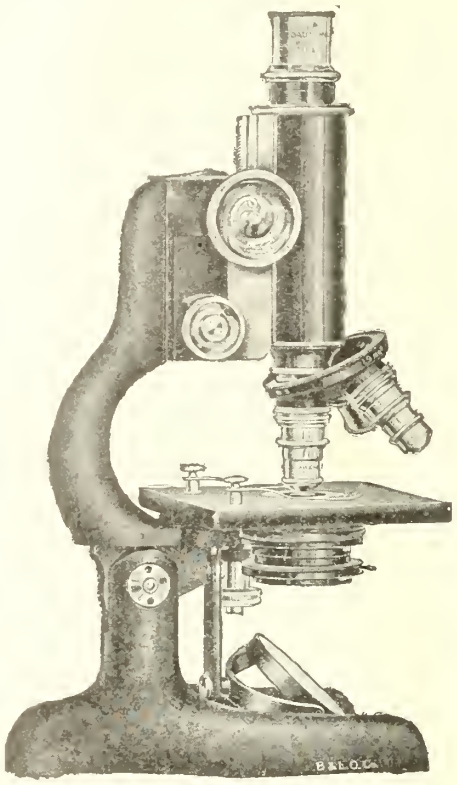

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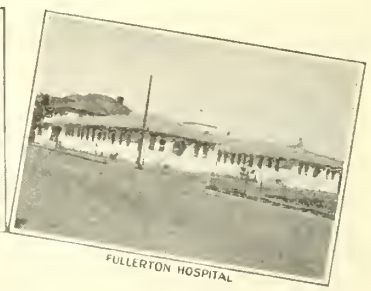
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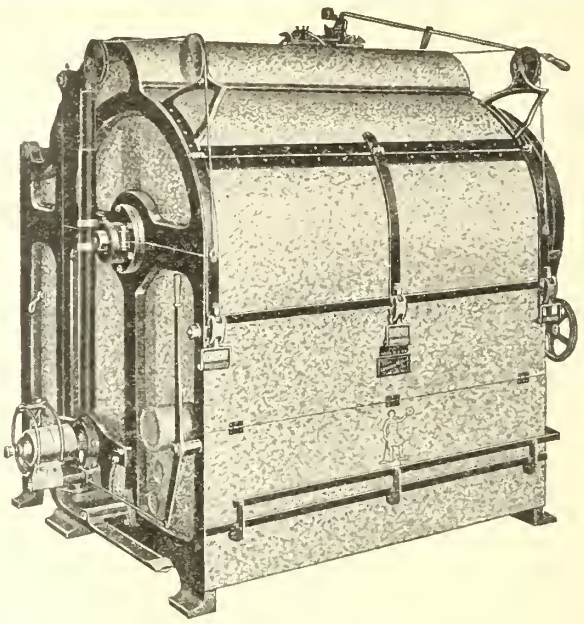

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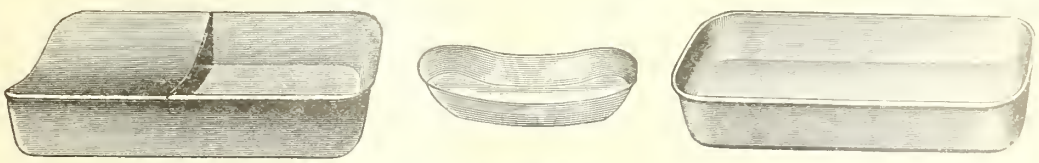

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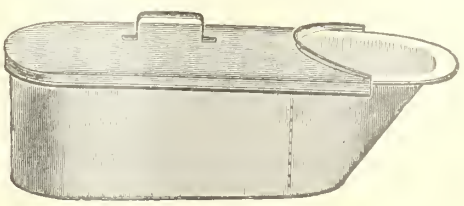

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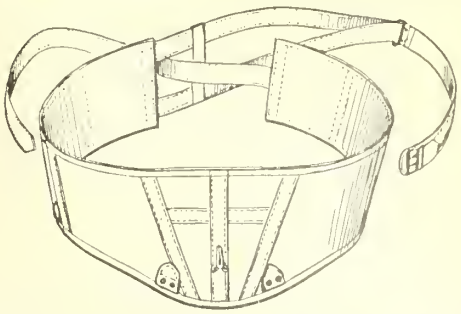

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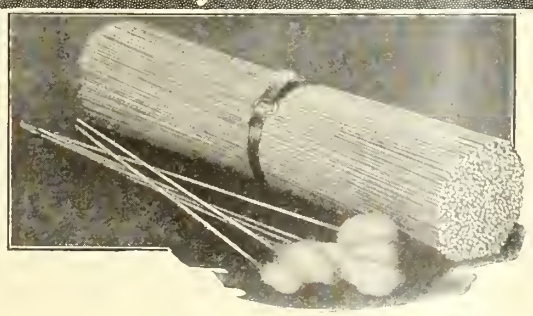

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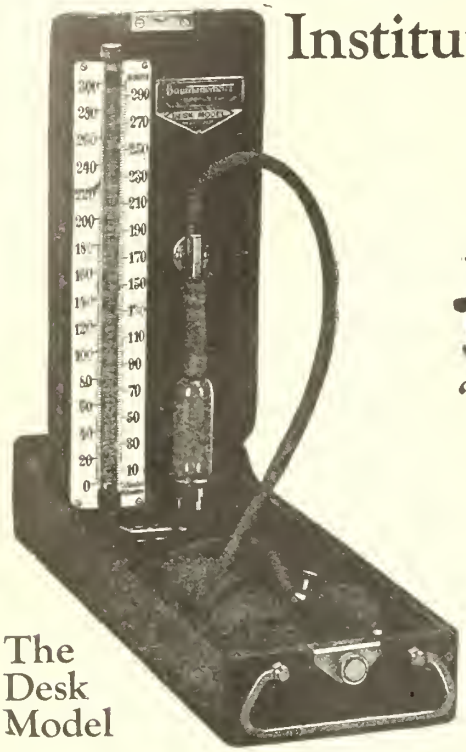

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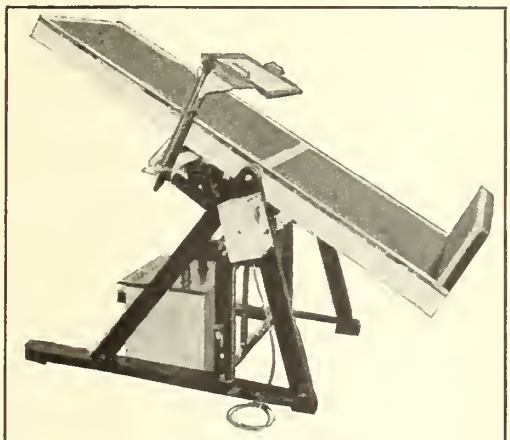

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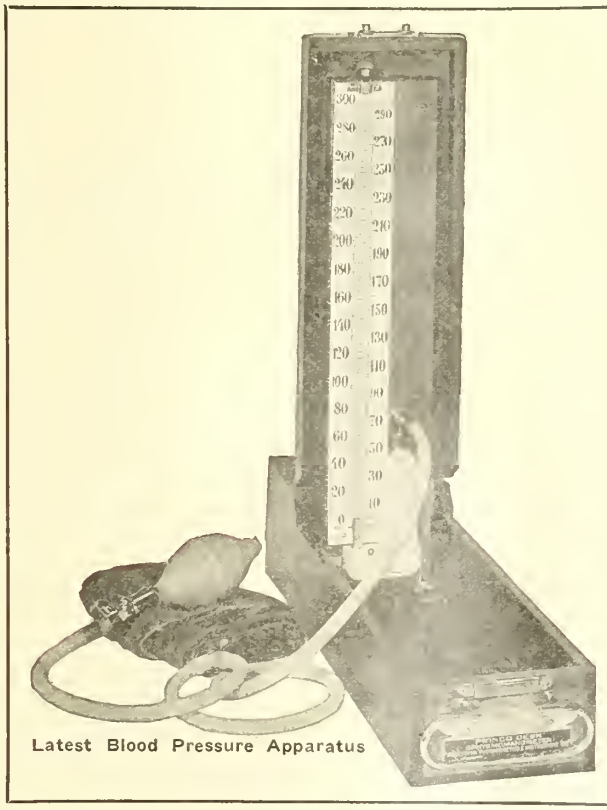

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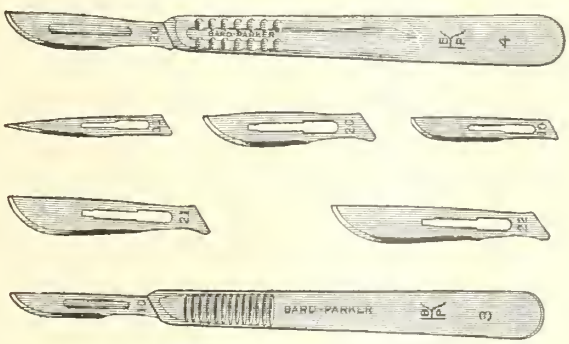

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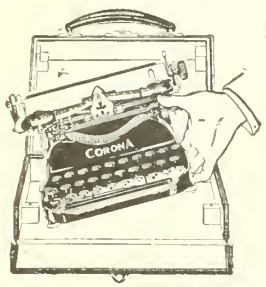

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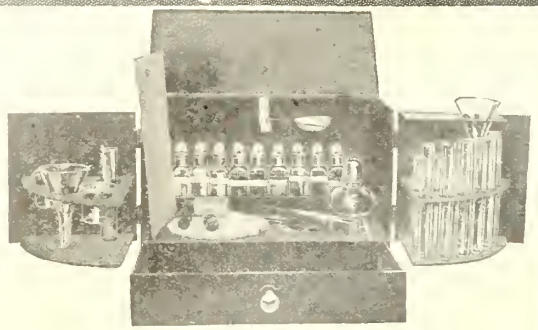

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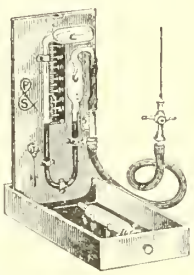

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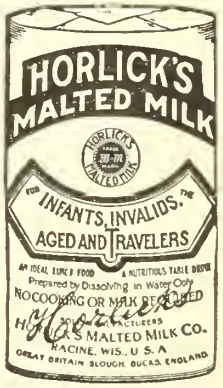

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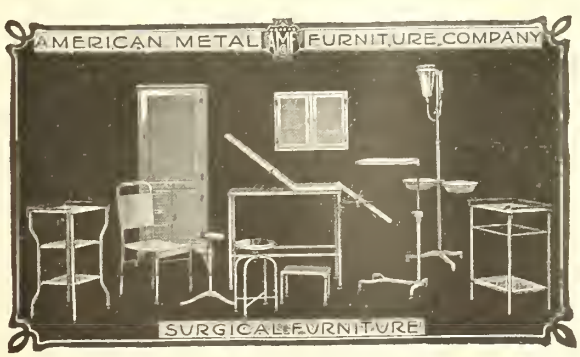

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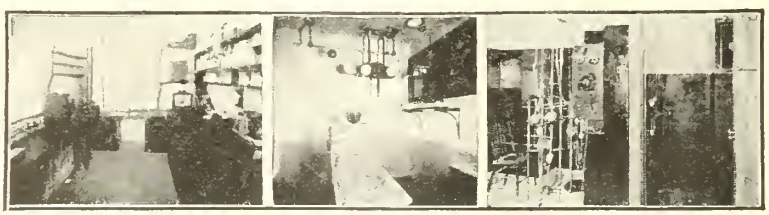

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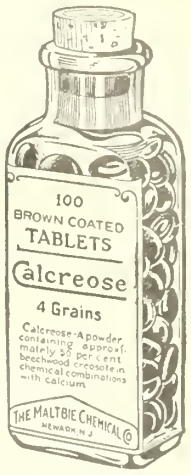

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A Physician's Function—My function as a physician is not discharged when I say to a solicitous client, "There is nothing the matter with you," unless that opinion is fully accepted. And if my patient continues to believe there is something the matter with him, there is something the matter with him, and my function has not been fulfilled until I have made him see, as I see, that he is not in jeopardy.—Henry B. Faville, Pennsylvania Medical Journal.

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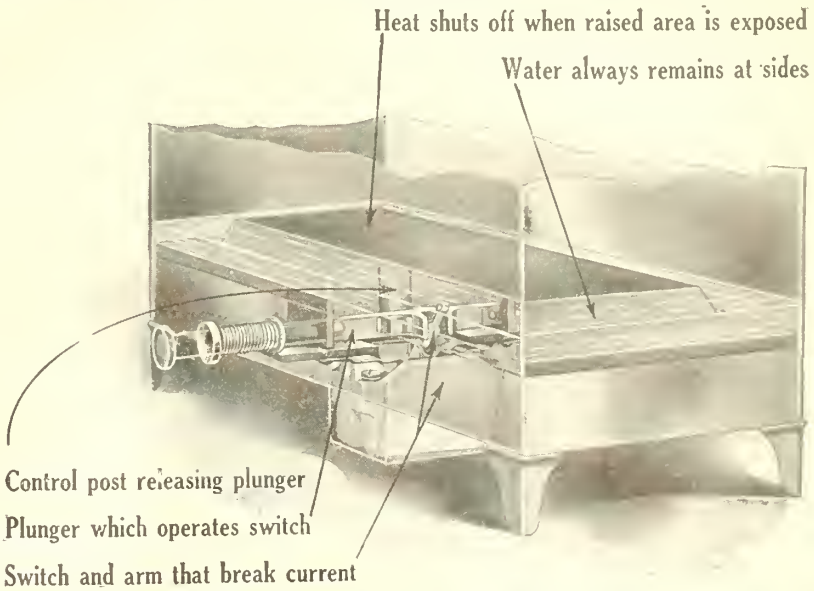

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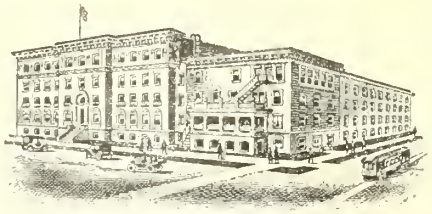
On the basis of figures presented by Anna E. Rude, Washington, D. C. (Journal A. M. A., September 16, 1922), it is estimated that approximately 13.6 per cent of the total births during the year 1920 occurred in hospitals. This percentage varied from 1.7 in Arkansas and Mississippi, to 40.1 in Illinois. Though these figures are only approximate, because of the admitted limitation of the questionnaire method, they at least point significantly to several phases of the hospital problem in relation to obstetrics. They show that there is hospital provision for approximately 40 per cent of the births in the United States, but that only 14 per cent of the births during 1920 occurred in hospitals. In this lack of utilization of available hospital facilities for confinement care are involved three important problems: (1) cost of hospital care; (2) inaccessibility of hospitals, and (3) lack of knowledge concerning the advisability of hospital care. Many other equally important problems await solution in connection with the hygiene of maternity and infancy. The Sheppard-Towner Act is limited to a five-year period. Its fundamental purpose is to enable States to demonstrate for themselves the value of such work in terms of life saving and improved health, and to stimulate them to develop more complete programs for making such work effective. The protection of maternity and infancy is not the function of one isolated group, but is dependent on the obstetrician, the pediatrician, and general practitioner, the public health nurse and the social worker in co-operation with the public health authorities. In addition, it is dependent on the co-operation of an enlightened public.



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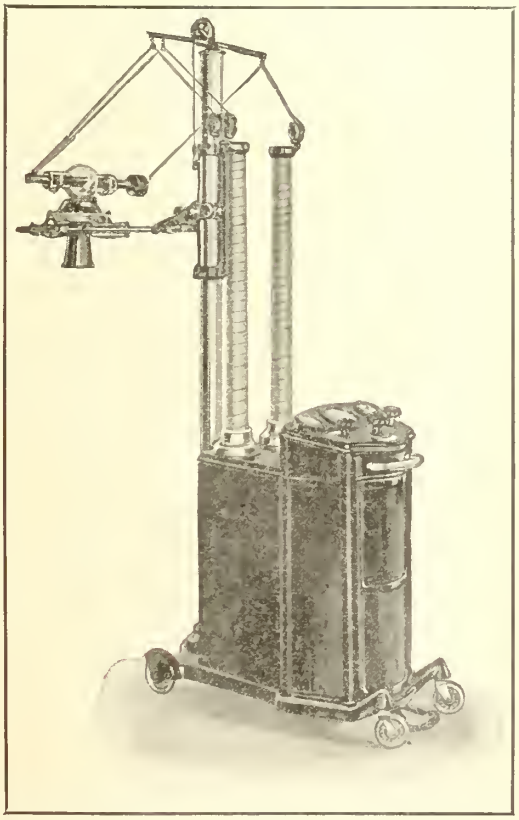

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2. How often do you attend the meetings of your Medical Society? What for?

3. Do you assume that the Medical Society will extend to you the benefits of the Association without any effort on your part?

4. Do you realize how much you can do to assist your brother practitioners in fighting the menaces confronting the profession?

5. If you do realize it, have you done your part in helping to combat the evils?

Every physician has an inalienable partnership in his medical association; the prosperity of the organization rests with each individual.

It is essential to alert membership that every individual has an understanding of the needs of the association and a loyalty to carry out its policy, and that you give the keenest co-operation to your fellow members and the officers of the organization.

When you grasp this spirit then you will be a worthy member of the medical profession and will become a contributor to the force that is necessary to make the organization serve the end for which it was intended. (Editorial, Illinois Medical Journal, October, 1922.)

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The advertising columns of the JOURNAL are used by physicians, hospitals and the public.

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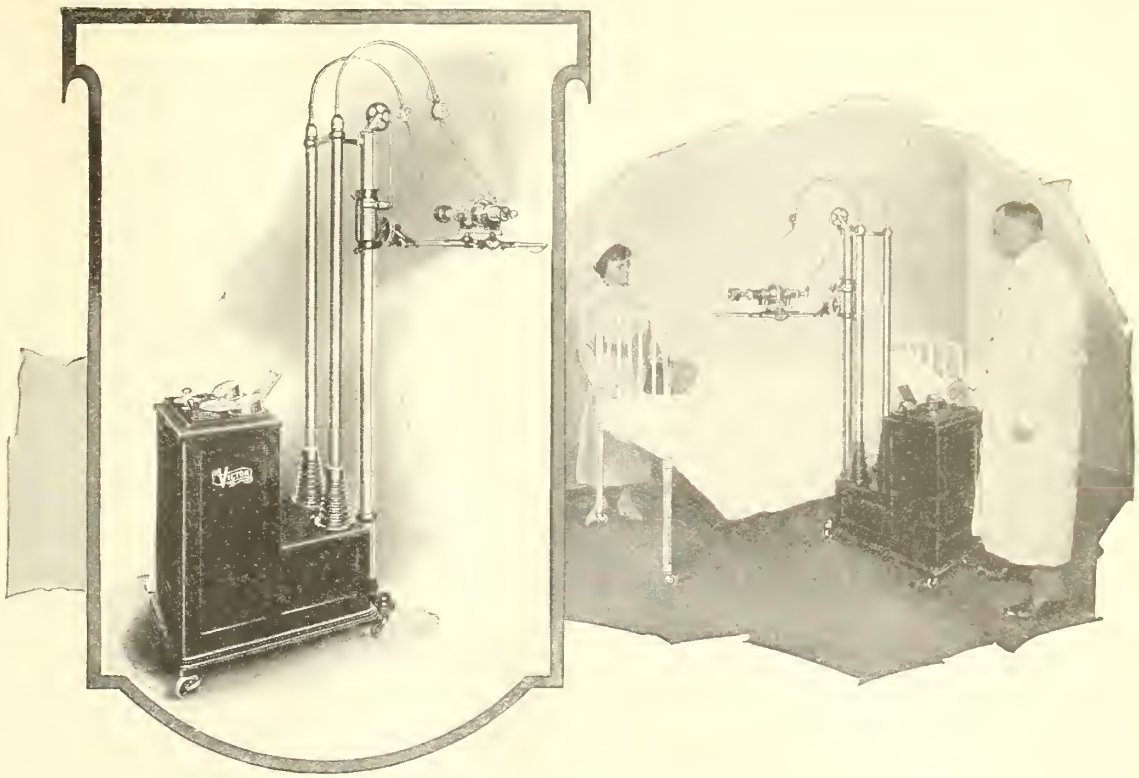

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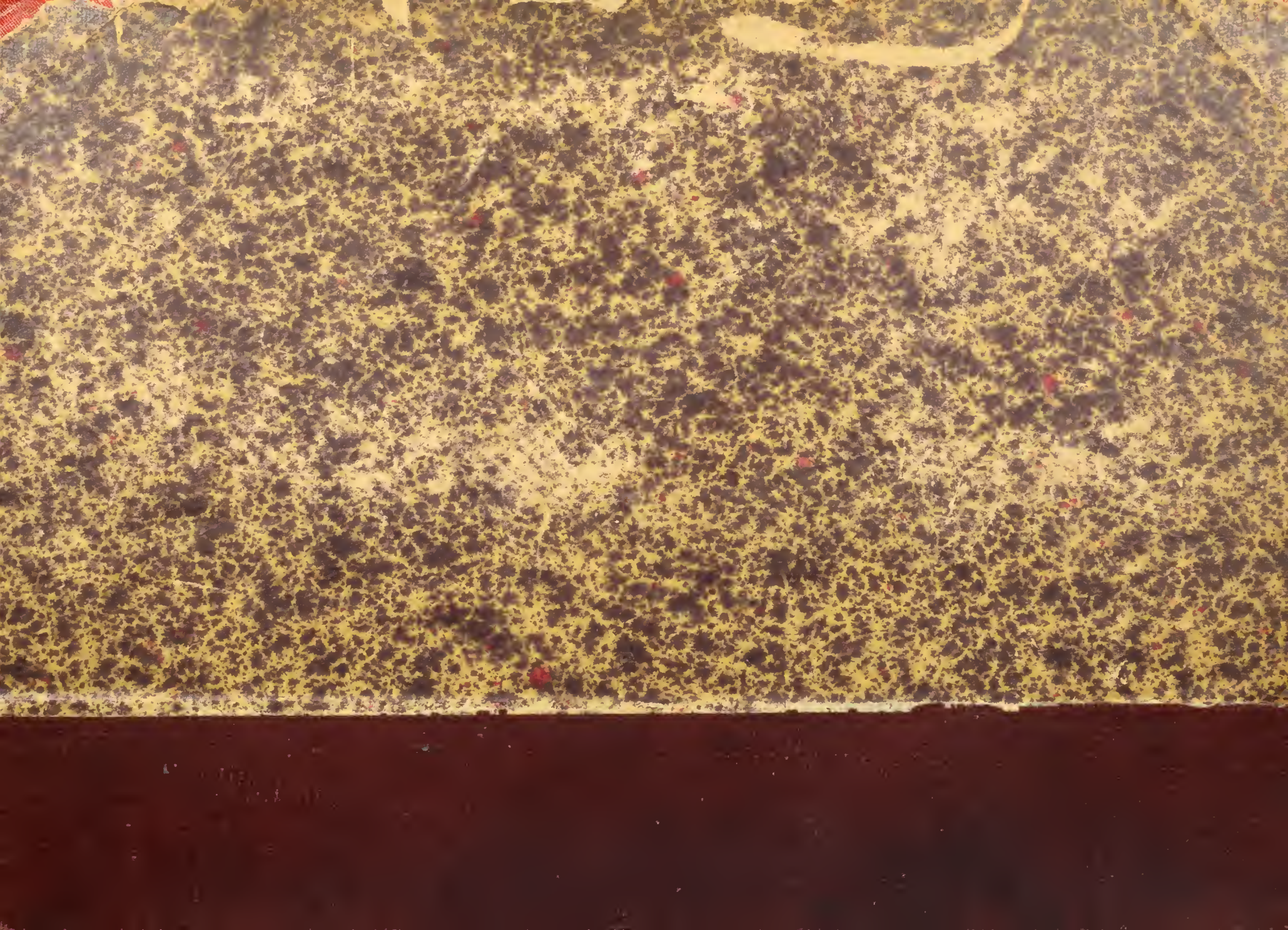
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